

Utah High School to College and Career PATHWAYS

Educator's Guide



GIVING
STUDENTS
THE
EDGE

In Support of the Utah High School to College and Career Pathways

Dear Educators,

Utah is a part of a rapidly changing world. Our ability to deliver educational opportunities that will help today's students fully participate in our vibrant economy is critical – not only to individual students, but to Utah's economy as a whole.

This *Educator's Guide to the Utah High School to College and Career Pathways* will help you implement educational practices built on the foundation of Rigor, Relevance, and Relationships – what we call “the new 3 Rs.” The Pathways (within eight Areas of Study) are *rigorous* programs of study to assure strong academic and technical preparation. Pathways create *relevance* of learning, connecting school work to work beyond high school, and validate the *relationships* between students and the educators who can be their advocates and mentors as they transition to post-secondary options. Pathways ensure that students will be prepared to take advantage of the full range of post-secondary options, including on-the-job training, certification programs, two- and four-year college degrees, and the military.

Utah's strong tradition of individualized planning (SEOP) through the Comprehensive Counseling and Guidance program will be enhanced by Pathways. Pathways will help students clearly recognize the opportunities available to them in high school, and will ease the transition to employment and educational opportunities beyond high school. Helping students understand their interests, talents and skills, and how these might best be applied in the labor market, will increase chances for personal fulfillment in the workplace. It will also help to ensure that Utah's economy continues to thrive.

Please take advantage of the information in this Guide to add focus and structure to the programs of study being offered in your school. The result for your students will be better-defined education occupation plans, expanded post-secondary opportunities, and increased confidence in career-related talents and skills. Your efforts to provide leading edge instruction to Utah's students are greatly appreciated.



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Utah High School to College and Career Pathways

FOR
Utah Middle/Junior High Schools
and
Utah High Schools

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Utah's Pathways Initiative – Overview

HIGH SCHOOL TO COLLEGE & CAREER PATHWAYS

In Utah, our challenge is to provide opportunities for every student to succeed in the 21st century workplace. Providing these opportunities requires that programs keep pace with a rapidly changing business and economic environment. Our high school students must have a strong academic education, obtain Career and Technical Education skills, and be prepared to transition to some post-secondary education.

Utah's Pathway Initiative – What are Career Pathways?

The High School to College and Career Pathways initiative helps match education and workplace needs. Through partnerships with post-secondary institutions, the school districts, business, and industry, Pathways identify and group courses within Career and Technical Education (CTE) areas of study that offer students depth of knowledge and skill, linked with specific post-secondary programs culminating in degrees or certificates.

*The **goals** are to:*

- **Maximize opportunities** for students.
- **Increase student awareness** of careers and education and training.
- **Strengthen** the planning process using a Student Education Occupation Plan (SEOP).
- **Ease student transitions** between secondary and post-secondary education through concurrent enrollment, articulation agreements, skill assessment recognition, comprehensive counseling and guidance, regional and state planning.
- **Align training** with employer needs.
- **Provide** strong academic skills and real-world problem solving skills.

*The **objectives** that must be addressed in order to meet these goals are:*

- Provide students with information, curriculum choices, and career counseling around High School to College and Career Pathways that allow students to reach their full potential.
- Establish strong links between high school and college programs through concurrent enrollment and articulation in order to improve transitions and student success in post-secondary education.

- Provide Career and Technical Education opportunities in high school that allow students to concentrate on a pathway.
- Provide strong academic skills and real-world problem-solving skills, especially in math, science, language arts and computer skills.

*The **components** of a specific pathway:*

- Represent the entire spectrum of careers available to students entering the workforce.
- Reflect the full range of work requirements (entry level to highly specialized).
- Reflect the full range of educational requirements (high school graduation to advanced degrees).

*The **anticipated outcomes** of pathways include:*

- Increased academic and skill achievement at secondary and post-secondary levels.
- Decreased need for remediation at the post-secondary level.
- Increased enrollment and persistence in post-secondary education.
- Increased attainment of post-secondary degrees, certificates, or other recognized credentials.
- Increased rate of entry into employment or future education.
- Savings of time and money for students.

Following are the **benefits** of Career Pathways:

- **Students** use Pathways to investigate a wide range of career choices. Pathways make it easier for students to understand the relevance of required courses and select elective courses more wisely.
- **Parents** learn what academic and technical courses their children need for college and a variety of career fields. Pathways and the high standards that go with them reassure parents that their children will be fully prepared for college and the workplace.
- **School counselors** use Career Pathways to help students explore options for the future. Current information on the academic, technical, and college requirements for a wide range of careers will be readily available.
- **Teachers** use Pathways to promote programs, increase student participation, and encourage students to persist in training beyond high school.
- **Schools** use Pathways to organize to meet the demands of post-secondary education and the expectations of employers.
- **Employers** partner with schools to contribute to the development of high academic standards that help students prepare for work and help workers keep their skills up to date. Employers gain workers who are prepared to learn new skills, adjust to technological change, and advance their careers.

The **role** of public education and higher education:

Teachers/Instructors

- Help align courses as part of developing articulation agreements.
- Identify and address gaps.
- Coach students.
- Provide orientation for the future.
- Market Pathways to students.

Counselors

- Help students gather good information.
- Help students make meaningful plans.
- Utilize Pathways as a tool.

Parents

- Seek career information.
- Have conversations with students.
- Participate in student career planning activities (SEOP, etc.).

Administrators

- Provide leadership to articulation development.
- Strengthen concurrent enrollment opportunities.
- Inform decision makers.
- Facilitate staff development opportunities.

Pathways will **build on Utah's existing programs**.

Some might ask if this is just another new educational reform initiative that will be here today and gone tomorrow. This initiative takes strong educational practices and pulls them into a comprehensive program, building upon and tying together:

- Careers.utah.gov Web site.
- Comprehensive Counseling and Guidance.
- Concurrent Enrollment.
- Articulation of courses between school districts and colleges.
- Parent involvement.
- Regional planning as a cooperative effort of higher and public education.

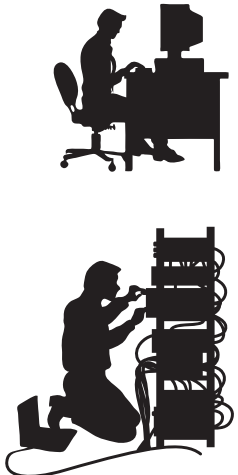

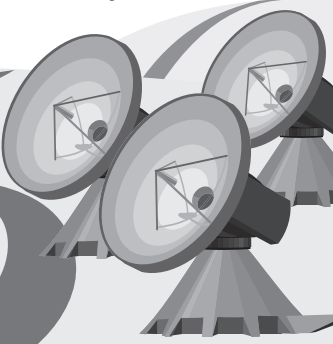
Pathways will **address national and state educational issues** such as:

- New Federal Carl Perkins Career and Technical Education legislation.
- Federal and national programs of study (clusters/pathways).
- High school reform initiatives.
- High school to college transitions.
- High school graduation rates.
- High school graduation requirements.
- Economic needs of highly trained workers.

Students need the help of parents and counselors to create educational plans that are aligned with future career and college goals. The Utah High School to College and Career Pathways initiative, when fully implemented, will be an effective tool for accomplishing this goal.

Overview of Responsibilities for Implementation

HIGH SCHOOL TO COLLEGE & CAREER PATHWAYS

Secondary Education Pathway Responsibilities	Combined Secondary and Post-Secondary Responsibilities	Post-Secondary Pathway Responsibilities	Business/Industry/ Employer Responsibilities
<ul style="list-style-type: none"> • Offer CTE pre-high school preparation programs. • Begin preparation for college and career with individual career/education plans (SEOP) at the 9th grade level. • Assess for college readiness and apply appropriate enrichments. • Use junior and senior years to prepare students for college and/or help students earn college credits. • Offer credit-based transitions programs such as concurrent enrollment. 	<ul style="list-style-type: none"> • Develop High School to College and Career Pathways with articulation agreements and curriculum alignment. • Provide professional development opportunities for secondary and post-secondary faculty. • Provide awareness and planning opportunities for students and parents. 	<ul style="list-style-type: none"> • Establish clear expectations for college entrance. • Offer concurrent enrollment options. • Develop articulation agreements from secondary to post-secondary and from colleges to universities. • Incorporate creative delivery strategies such as distance learning and online courses. • Develop state-wide articulation agreements for Career Pathways. 	<ul style="list-style-type: none"> • Provide guidance to faculty and staff regarding student preparation. • Provide students with work-based experiences such as internships and apprenticeships. • Offer employer-sponsored initiatives such as faculty externships, employer-staff loans, student scholarships, etc. • Obtain industry/employment assistance with curriculum development and industry standards. 

Student Education Occupation Plan (SEOP)

The Comprehensive Counseling and Guidance Program (CCGP), and in particular the Individual Planning (also known as the Student Education Occupation Plan, or SEOP) component, is critical to the success of the Pathways Initiative. The SEOP process and conferences include:

- Objectives by grade level.
- Assessments.
- Advisement.
- Goal setting and planning processes.
- Student direction.

The written document that results includes the student's:

- Goals.
- Next-step plans.
- Four-year-plus plans.
- Education and career goals.
- Graduation requirements and progress.
- Parent or guardian signature.

Comprehensive Counseling and Guidance enhances the opportunities for students and their parents to understand the full range of high school and post-secondary education and career options. Students are supported in the development of a plan that helps connect their personal characteristics (e.g., interests, aptitudes, work values) with education and occupation goals that can help them maximize their potential.

Career Information Delivery System

A key tool that is being used to maximize the benefits of CCGP, and promote broad utilization of Pathways for Utah students, is the state-sponsored Career Information Delivery System, *Utah Choices*. Career Information Delivery Systems (CIDS) are:

Computer-based systems that organize, analyze and deliver national, state and local information to individuals who are exploring careers or seeking employment. CIDS generally

provide national, state and local information on civilian and military occupations, educational institutions and training programs. CIDS are used to help individuals learn about the wide range of career opportunities available to them. CIDS help individuals become more aware of occupations that suit their interests and preferences, to learn about educational and training opportunities and encourage them to seek out more information on their own.

-Training Manual

Improved Career Decision-making in a Changing World

An ambitious project is underway in partnership with the publisher of the Utah CIDS to assure broad dissemination of information about the Pathways. Work has already begun on the development of the database that will:

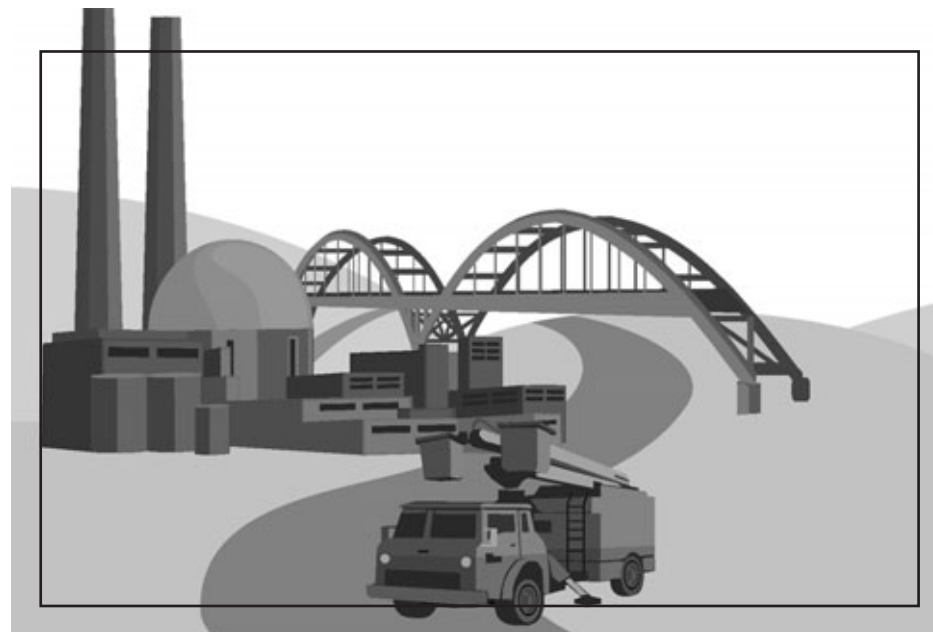
- Reflect the 62 statewide pathways, including the academic and CTE courses that have been defined to help students achieve high school graduation and transition to college and careers.
- Link all of the regional post-secondary pathways (i.e., programs of study) to facilitate an efficient search and sort process in order to provide information specific to a user's needs.
- Be accessible to regions, districts and specific schools so their resident programs can be marketed to their own students as well as to students beyond their borders.
- Provide the content to help drive the guidance process currently being designed for delivery via the CIDS.
- Assure that students will be able to search both secondary and post-secondary programs of study as a function of their interest in a particular occupation, a particular school, a college major, an industry, a national career cluster, or via a myriad of other connections already searchable in the CIDS.
- Facilitate the customization of course listings to attract potential students to particular programs.

CTE Pathways: Giving Students the Edge

CAREER & TECHNICAL EDUCATION

Did you know . . .

- Career and Technical Education has **62 career pathways within eight areas of study**. Each pathway is structured so students can investigate a wide range of career choices. Pathways make it easier for students to understand the relevance of required courses and helps students choose elective courses more wisely.
- CTE Pathways show students a direct connection between doing well in high school and being able to **transition smoothly** to post-secondary opportunities or getting a good job when they graduate.
- CTE Pathways equip students with the **technical skills and academic knowledge** needed to prepare for future employment and/or a successful transition to post-secondary education.
- Students who focus on a CTE Pathway acquire the skills necessary for entry into **well paid careers** with high potential for rapid financial growth, increased levels of responsibility, and a high degree of personal satisfaction.
- Each CTE Pathway features **career exploration and Work-Based Learning (WBL) opportunities** connected to a student's career interest area.
- Students who participate in CTE courses are encouraged to take tests in the area in which they are studying. Students who successfully complete a specific skill certificate test, demonstrating substantial skill at 80% on ALL performance objectives and 80% on the written test, will be issued a **Career and Technical Education Skill Certificate**.



- Over one-third of all courses available within the eight areas of study offer **concurrent enrollment credit**. Students have the opportunity to earn college credit while in high school, saving time and money, putting students on the fast-track to earning an industry license or associate's degree.

This past year, Career and Technical Education students earned over 57,000 concurrent enrollment credit hours.

Our vision is to ensure that every student has the opportunity to explore a variety of career areas throughout his or her lifelong education. With an emphasis on **rigor, relevance, and relationships**, **Career Pathways** will help students develop the academic knowledge, technical skills, and employability skills vital for entry into the evolving labor market.

Dropout Prevention

According to the National Center on Education, Utah ranks eighth-highest in percentage of high school graduates. Overall, **Utah high schools graduate 76.7% of their students**, compared to the national average of 69.6%.

Students who earn Career and Technical Education credits tend to remain in school. In fact, **Career and Technical Education students are three times less likely to drop out of school.**

A combination of **60% academic courses and 40% Career and Technical Education** is the most effective dropout prevention program in the American high school.

Job Placement

Statistics indicate that the more Career and Technical Education courses students take, the **less likely they are to suffer periods of unemployment.**

Career and Technical Education graduates **find employment 2.2 times faster** than graduates from general education programs.

High school students who graduate with a Career and Technical Education concentration are 2.5 times more likely to be **employed while pursuing post-secondary education.**

According to the U.S. Bureau of Labor Statistics, 18 of the 20 fastest growing occupations within the next decade will **require Career and Technical Education.**

EXPLORING CTE PATHWAYS IN –

- High school
- Two- and four-year colleges
- Utah College of Applied Technology

Career and Technical Education prepares students for tomorrow's workplace. Career and technical educators work closely with the **Department of Workforce Services and Utah employers** to make sure students have the skills the labor market demands.

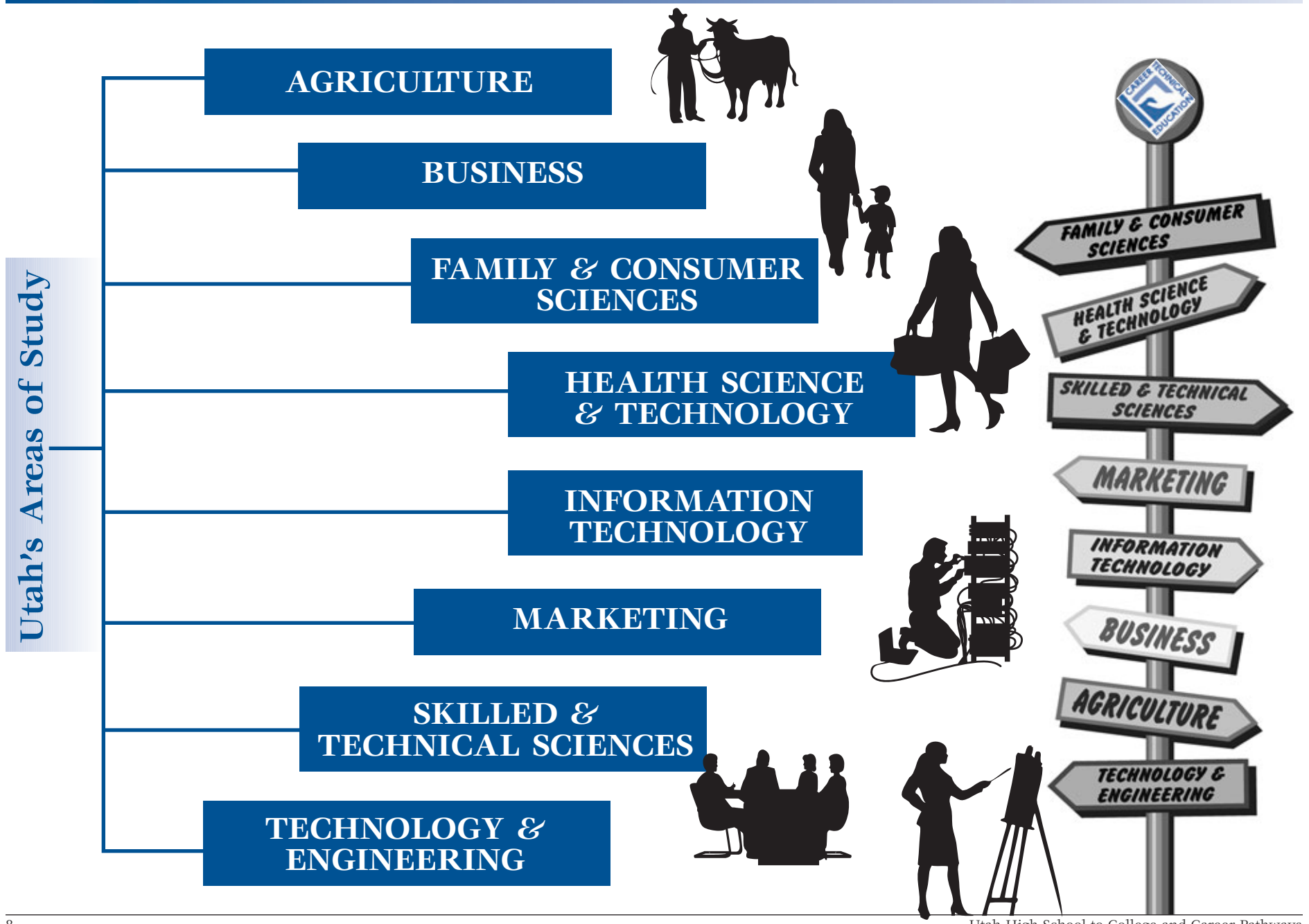
Encouragement for Further Learning

In Utah, there are over **213,000 secondary and post-secondary Career and Technical Education students.**

There are **nine post-secondary institutions** in Utah that offer technical programs, including community colleges, technical institutes, skill centers, and other public and private two-year and four-year colleges. Over 11,500 students attend courses through these institutions.



Utah's Areas of Study



Agricultural Education

- *Agricultural Systems Technology*
- *Horticulture Science & Management*
- *Natural Resources Science & Management*
- *Production/Processing Animal Science*
- *Production/Processing Plant & Soil Science*
- *Production/Processing Science & Management*

Business Education

- *Accounting & Finance*
- *Business Administrative Support*
- *Business Entrepreneurship*
- *Business Management*
- *Business Technology Support*

Family & Consumer Sciences Education

- *Child Development*
- *Consumer Economics Services*
- *Family & Human Services*
- *Fashion Design, Manufacturing & Merchandising*
- *Food Science, Dietetics & Nutrition*
- *Food Service & Culinary Arts*
- *Hospitality Services*
- *Interior Design*

Health Science & Technology Education

- *American Sign Language*
- *Biotech Research & Development*
- *Biotechnology*
- *Health Informatics*
- *Medical Office Administrative Assistant*
- *Therapeutic Services*
- *Dental*
- *Emergency Medical Technician (EMT)*
- *Exercise Science/Sports Medicine*
- *Medical Assistant*
- *Nursing*
- *Optical Technician*
- *Pharmacy*
- *Surgical Technician*

Information Technology Education

- *Information Support & Services*
- *Database Development & Administration*
- *Technical Support*
- *Interactive Media*
- *Digital Media (Multimedia)*
- *Web Development & Administration*
- *Network Systems*
- *Programming/Software Development*

Marketing Education

- *Marketing Entrepreneurship*
- *Marketing Management*
- *Sales & Service Marketing*
- *Travel & Tourism*

















Skilled & Technical Sciences Education

- *Building Trades*
- *Carpentry*
- *Electrician*
- *HVAC*
- *Plumbing*
- *Communication*
- *Television Broadcasting Technician*
- *Mechanics & Repairs*
- *Automotive Collision Repair*
- *Automotive Service Technician*
- *Electronics*
- *Heavy Duty Diesel*
- *Precision Production Trades*
- *Cabinetmaking/Millwork*
- *Drafting/CAD*
- *Graphics/Printing*
- *Machine Tool*
- *Welding*
- *Personal Services*
- *Cosmetology/Barbering*
- *Protective Services*
- *Firefighting*
- *Law Enforcement*
- *Transportation & Material Moving*
- *Commercial Aviation*
- *Visual Arts*
- *Commercial Art*
- *Commercial Photography*

Technology & Engineering Education

- *Pre-Engineering*
(Utah Pre-Engineering Program)
- *Project Lead the Way*
(National Pre-Engineering Program)

National Career Clusters/Utah Pathways Crosswalk

National Cluster	Utah Career and Technical Education Pathways	National Cluster	Utah Career and Technical Education Pathways
	Agricultural Systems Technology (Agriculture) Horticulture Science and Management (Agriculture) Natural Resources Science and Management (Agriculture) Production/Processing Animal Science (Agriculture) Production/Processing Plant and Soil Science (Agriculture) Production/Processing Science and Management (Agriculture)		Food Services & Culinary Arts (FACS) Hospitality Services (FACS) Travel & Tourism (Marketing)
	Building Trades (Skilled & Technical Sciences) Carpentry Electrician HVAC Plumbing Precision Production Trades (Skilled & Technical Sciences) Cabinetmaking/Millwork Drafting/CAD Graphics/Printing Machine Tool Welding		Family & Human Services (FACS) Consumer Economics Services (FACS) Personal Services (Skilled & Technical Sciences) Cosmetology/Barbering
	Interior Design (FACS) Communication (Skilled & Technical Sciences) Television Broadcasting Technician Visual Arts (Skilled & Technical Sciences) Commercial Art Commercial Photography Precision Production Trades (Skilled & Technical Sciences) Graphics/Printing		Information Support & Services (Information Technology) Database Development & Administration Technical Support Interactive Media (Information Technology) Digital Media (Multimedia) Web Development & Administration Network Systems (Information Technology) Programming/Software Development (Information Technology)
	Business Administrative Support (Business) Business Entrepreneurship (Business) Business Management (Business) Business Technology Support (Business)		Protective Services (Skilled & Technical Sciences) Firefighting Law Enforcement
	Child Development (FACS)		Precision Production Trades (Skilled & Technical Sciences) Cabinetmaking/Millwork Drafting/CAD Machine Tool Welding Pre-Engineering (Technology and Engineering) Pre-Engineering (Utah Pre-Engineering Program) Project Lead the Way (National Pre-Engineering Program)
	Accounting and Finance (Business) Consumer Economics Services (FACS)		Marketing Entrepreneurship (Marketing) Marketing Management (Marketing) Sales & Service Marketing (Marketing) Fashion Design, Manufacturing & Merchandising (FACS)
			Food Science, Dietetics & Nutrition (FACS) Mechanics and Repair (Skilled & Technical Sciences) Electronics Pre-Engineering (Technology & Engineering) Pre-Engineering (Utah Pre-Engineering Program) Project Lead the Way (National Pre-Engineering Program)
	American Sign Language (Health Science & Technology) Biotech Research and Development (Health Science & Technology) Biotechnology Health Informatics (Health Science & Technology) Medical Office Administrative Assistant Therapeutic Services (Health Science & Technology) Dental Emergency Medical Technician (EMT) Exercise Science/Sports Medicine Medical Assistant Nursing Optical Technician Pharmacy Surgical Technician		Mechanics & Repair (Skilled & Technical Sciences) Automotive Collision Repair Automotive Service Technician Heavy Duty Diesel Transportation & Material Moving (Skilled & Technical Sciences) Commercial Aviation

Career Fields in Utah

Compatible with “Holland Codes”

Student career interests are most commonly described by six career personality types defined by John Holland in his theory of occupational choice. Known as “Holland Codes” (corresponding labels listed in descriptions below), these six types are at the base of a common organizational structure around which CTE program areas, national career clusters, and other career information can be arranged. An individual will typically be compatible with up to three of the following personality types:

TECHNICAL

Realistic (Doers) have good coordination, motor skills and mechanical aptitude, enjoy using tools, and prefer hands-on work tasks.



ARTS AND RECREATION

Artistic (Creators) are imaginative, creative, favor unstructured work environments, and enjoy art, music, literature, and poetry.



MARKETING AND ADMINISTRATION

Enterprising (Persuaders) like leadership and responsibility, are good at persuading others, and have good verbal abilities.



SCIENTIFIC

Investigative (Thinkers) enjoy science and math, are analytical thinkers, like working with ideas, and generally like to work alone.



SOCIAL HUMANITARIAN

Social (Helpers) like helping others, have good communications skills, and enjoy social situations.



BUSINESS OPERATIONS

Conventional (Organizers) like working with numbers and other data, pay close attention to detail, and like structure and rules.



Note to teachers: For more information on Utah Career Fields and Holland Codes, contact the Utah Career Resource Network: UTChoices@aol.com or 1-800-733-7887

One Mission: Student Success

AGRICULTURAL EDUCATION

Agricultural Education – (6 Pathways)

- *Agricultural Systems Technology*
- *Horticulture Science & Management*
- *Natural Resources Science & Management*
- *Production/Processing Animal Science*
- *Production/Processing Plant & Soil Science*
- *Production/Processing Science & Management*

Our Mission: Agricultural Education prepares students for employment and/or continuing education opportunities in agriculture through technical instruction in the classroom, experiential education through the laboratory and Supervised Agricultural Experience Program (SAEP), and leadership and personal development through the Organization for Agricultural Students – the FFA.

General Tips:

- The Utah agricultural education pathways are based on national skills standards and the national cluster pathways for agricultural education.
- Specific course offerings vary by school. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students into college horticulture, agricultural mechanics, and agricultural science programs.
- By taking Agricultural Education courses, students learn to value and understand the vital role of agriculture, food, fiber, and natural resources systems in advancing personal and global well-being.

Tips for Teachers and Counselors:

- To complete a pathway, students must complete a total of 3.00 credits. Students must complete the required foundation courses (2.00 credits) and then choose 1.00 credit from the introductory or elective courses to be a completer. Students seeking a career in agriculture should develop high-level skills in math and science.
- Agriculture is the nation's largest employer, generating approximately 20% of our nation's employment. However 10% of today's professional jobs in agriculture go unfilled because of a lack of qualified graduates. As the demand increases for agricultural products, so does the demand for qualified individuals.

- By taking Agricultural Education courses, students gain an important foundation of knowledge and skills necessary for continuing education in agriculture, which can lead to a career in food and nutrition science, or as a golf course superintendent, forester, veterinarian, agricultural engineer, water quality manager, wildlife and fisheries manager, or farm/ranch manager.

- Through the SEOP process students may take advantage of courses in Agricultural Education that will count as science credit toward graduation.

Leadership Opportunities:

- Students are provided with opportunities for leadership development, personal growth, and career success through three instructional components: classroom/laboratory instruction (contextual learning), supervised agricultural experience program (Work-Based Learning), and student leadership organizations (National FFA Organization).
- The Career & Technical Student Organization for these pathways is the National FFA Organization. FFA, 500,000 members strong, makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success.

Transition to Post-Secondary and/or Career:

- In a Supervised Agriculture Experience, students apply to real-life situations the concepts that they learn in the classroom and laboratory.
- A variety of related Work-Based Learning (WBL) experiences are available in each pathway. WBL experiences allow students to see, firsthand, how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that all students have an appreciation for agriculture and the environment and that Agricultural Education students develop essential career preparation skills through technical and experiential education, as well as personal leadership opportunities.



High School to College and Career Pathway: Secondary

Area of Study: Agricultural Education

Pathway: Agricultural Systems Technology

Middle School		State Requirements		High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50			Financial Literacy .50		
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00					
<p>Workforce Trends</p> <p>According to the U.S. Department of Labor, the growing interest in worldwide standardization of agricultural equipment should result in increased employment of agricultural engineers. Job opportunities should also result from the increasing demand for agricultural products, the continued efforts for more efficient agricultural production, and the increasing emphasis on the conservation of resources.</p> <p>Get the Facts</p> <p>Students enrolled in high school agricultural courses are looking to join a \$3.5-4.0 billion Utah industry.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Career and Technical Education Recommended Pathway Courses				<p>2.00 credits + 1.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>	
				(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)					
				CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
				Course #	Introductory Courses: (preferred)		Credit		
				01.0311	Agricultural Science & Technology I		1.00		
				02.0112	Biology: Agricultural Science & Technology		1.00		
				Foundation Courses: (required)					
				01.0211	Agricultural Systems Technology I		1.00		
				01.0221	Agricultural Systems Technology II		1.00		
				Elective Courses:					
				01.0111	Agricultural Business Management		1.00		
				01.0241	Agricultural Machinery Technology		1.00		
				01.0231	Agricultural Mechanics, Advanced		1.00		
				32.0199	Student Internship (Critical Workplace Skills)		.50		
				01.0100	Summer Agriculture Program		.25		
				Supervised Agriculture Experience Program (capstone experience)					
				Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					

000101

Horticulture Science & Management

AGRICULTURAL EDUCATION



High School to College and Career Pathway: Secondary Area of Study: Agricultural Education

Pathway: Horticulture Science & Management

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p> <p>Sample Occupations</p> <p>> Arborist</p> <p>> Botanist</p> <p>> Forest Geneticist</p> <p>> Golf Course Superintendent</p> <p>> Greenhouse Operator</p> <p>> Landscape Architect</p> <p>> Plant Breeder</p> <p>> Soil & Water Specialist</p> <p>> Tree Surgeon</p> <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					
			Financial Literacy .50	Financial Literacy .50					
			Computer Tech. .50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education 1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					<p>2.00 credits + 1.00 credit from introductory or elective courses</p>
<p>Workforce Trends According to the U.S. Department of Labor, positions in landscape and horticultural services are expected to increase at a fast pace.</p> <p>Get the Facts 24 million, or 17% of the American workforce, is employed in the agricultural industry.</p> <p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>				Course #	Introductory Courses: (preferred)	Credit			
				01.0311	Agricultural Science & Technology I	1.00			
				02.0112	Biology: Agricultural Science & Technology	1.00			
				Foundation Courses: (required)					
				01.0631	Floriculture & Greenhouse Management	1.00			
				01.0641	Nursery Operation & Landscape Management	1.00			
				Elective Courses:					
				01.0111	Agricultural Business Management	1.00			
				01.0651	Ornamental Horticulture, Applied	1.00			
				01.0631	Floriculture & Greenhouse Management A	.50			
				01.0631	Floriculture & Greenhouse Management B	.50			
				32.0199	Student Internship (Critical Workplace Skills)	.50			
				01.0100	Summer Agriculture Program	.25			
					Supervised Agriculture Experience Program (capstone experience)				

000102



High School to College and Career Pathway: Secondary

Area of Study: Agricultural Education

Pathway: Natural Resources Science & Management

Middle School					High School Suggested Education Plan				College & Careers																																								
7 th Grade	8 th Grade	State Requirements			9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																								
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training																																								
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																																										
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)																																										
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																																									
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																											
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CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL <table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>01.0311</td><td>Agricultural Science & Technology I</td><td>1.00</td></tr><tr><td>02.0112</td><td>Biology: Agricultural Science & Technology</td><td>1.00</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>03.0111</td><td>Natural Resource Management I</td><td>1.00</td></tr><tr><td>03.0121</td><td>Natural Resource Management II</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>01.0111</td><td>Agricultural Business Management</td><td>1.00</td></tr><tr><td>01.0351</td><td>Aquaculture, Introduction</td><td>1.00</td></tr><tr><td>01.0361</td><td>Aquaculture, Advanced</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr><tr><td>01.0100</td><td>Summer Agriculture Program</td><td>.25</td></tr><tr><td></td><td>Supervised Agriculture Experience Program (capstone experience)</td><td></td></tr></tbody></table>					Course #	Introductory Courses: (preferred)	Credit	01.0311	Agricultural Science & Technology I	1.00	02.0112	Biology: Agricultural Science & Technology	1.00	Foundation Courses: (required)			03.0111	Natural Resource Management I	1.00	03.0121	Natural Resource Management II	1.00	Elective Courses:			01.0111	Agricultural Business Management	1.00	01.0351	Aquaculture, Introduction	1.00	01.0361	Aquaculture, Advanced	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	01.0100	Summer Agriculture Program	.25		Supervised Agriculture Experience Program (capstone experience)		2.00 credits + 1.00 credit from introductory or elective courses 3.00 credits for completion
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Workforce Trends Utah has a wealth of natural resources, which includes five national parks, seven national monuments, seven national forests, two national recreation areas, 45 state parks, and millions of acres of Bureau of Land Management (BLM)-administered deserts and range land. With the multitude of natural resources in Utah there are a vast amount of career opportunities within eight federal and state divisions. Get the Facts There are 600 bison that roam on Antelope Island State Park, the largest island in the Great Salt Lake; the island herd is the second oldest privately held herd in the United States. Today, the bison on the island are among the most sought-after bison in the country.																																																	
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																																	

College & Careers				
Beyond High School				
There are a number of options for education and training beyond high school, depending on your career goals.				
> Certificate				
> Associate degree				
> Bachelor degree				
> Professional degree				
> On-the-job training				
> Apprenticeship				
> Military training				
Sample Occupations				
> Fish & Game Officer				
> Fish Hatchery Manager				
> Forest Worker				
> Mining Engineer				
> Outfitter/Guide				
> Park Manager				
> Water Technician				
> Wild Firefighter				
> Wildlife Officer				
For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov				

There are a number of options for education and training beyond high school, depending on your career goals.

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Fish & Game Officer
- > Fish Hatchery Manager
- > Forest Worker
- > Mining Engineer
- > Outfitter/Guide
- > Park Manager
- > Water Technician
- > Wild Firefighter
- > Wildlife Officer

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

000103

Production/Processing Animal Science

AGRICULTURAL EDUCATION



High School to College and Career Pathway: Secondary

Area of Study: Agricultural Education

Pathway: Production/Processing Animal Science

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																		
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																																		
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																																																		
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																																																				
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)																																																				
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																																																			
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																																					
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CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL <table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>01.0311</td><td>Agricultural Science & Technology I</td><td>1.00</td></tr><tr><td>02.0112</td><td>Biology: Agricultural Science & Technology</td><td>1.00</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>02.0211</td><td>Animal Science & Technology, Entry</td><td>1.00</td></tr><tr><td>02.0241</td><td>Animal Science & Technology, Advanced</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>01.0111</td><td>Agricultural Business Management</td><td>1.00</td></tr><tr><td>01.0351</td><td>Aquaculture, Introduction</td><td>1.00</td></tr><tr><td>01.0361</td><td>Aquaculture, Advanced</td><td>1.00</td></tr><tr><td>02.0251</td><td>Dairy Herd Management</td><td>1.00</td></tr><tr><td>02.0221</td><td>Equine Science & Technology</td><td>1.50</td></tr><tr><td>02.0261</td><td>Swine Herd Management</td><td>1.00</td></tr><tr><td>02.0231</td><td>Veterinary Assistant</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr><tr><td>01.0100</td><td>Summer Agriculture Program</td><td>.25</td></tr><tr><td></td><td>Supervised Agriculture Experience Program (capstone experience)</td><td></td></tr></tbody></table> 2.00 credits + 1.00 credit from introductory or elective courses 3.00 credits for completion					Course #	Introductory Courses: (preferred)	Credit	01.0311	Agricultural Science & Technology I	1.00	02.0112	Biology: Agricultural Science & Technology	1.00	Foundation Courses: (required)			02.0211	Animal Science & Technology, Entry	1.00	02.0241	Animal Science & Technology, Advanced	1.00	Elective Courses:			01.0111	Agricultural Business Management	1.00	01.0351	Aquaculture, Introduction	1.00	01.0361	Aquaculture, Advanced	1.00	02.0251	Dairy Herd Management	1.00	02.0221	Equine Science & Technology	1.50	02.0261	Swine Herd Management	1.00	02.0231	Veterinary Assistant	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	01.0100	Summer Agriculture Program	.25		Supervised Agriculture Experience Program (capstone experience)
Course #	Introductory Courses: (preferred)	Credit																																																									
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Workforce Trends Agriculture is the nation's largest employer, with more than 21 million people working in some phase of the industry, from growing food and fiber to selling it in the supermarkets.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		<p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>																																																							
Get the Facts Agriculture is a vital industry to Utah's economy. There are 15,000 farms in the state, totaling approximately 11.6 million acres, where Utah agriculturists produce crops and livestock worth nearly \$1 billion annually.																																																											

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

000104



High School to College and Career Pathway: Secondary

Area of Study: Agricultural Education

Pathway: Production/Processing Plant & Soil Science

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life: 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					
			Financial Literacy .50				Financial Literacy .50		
			Computer Tech. .50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education 1.00						
Workforce Trends Agronomy is a specialized field where many agronomists are independent consultants.		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.)				<p>2.00 credits + 1.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>
Get the Facts About 17% of all U.S. agricultural products are exported yearly, including 99 million tons of grains and feed and 2 million tons of fresh vegetables.									

000105

Production/Processing Science & Management

AGRICULTURAL EDUCATION



High School to College and Career Pathway: Secondary

Area of Study: Agricultural Education

Pathway: Production/Processing Science & Management

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School		9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biology–Agricultural Science and Tech. or Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50	Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00					
Workforce Trends According to the Utah Farm Bureau Federation, more than 100,000 people are employed by agriculture and agribusiness in the state of Utah.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.)				<p>2.00 credits + 1.00 credit from introductory or elective courses</p>
Get the Facts Farmers and ranchers provide food and habitat for 75% of the nation's wildlife. One-fourth of the world's grain, milk, and eggs are produced in the United States.					CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
					Course #	Introductory Courses: (preferred)	Credit		
					01.0311	Agricultural Science & Technology I	1.00		
					02.0112	Biology: Agricultural Science & Technology	1.00		
					Foundation Courses: (required)				
					01.0321	Agricultural Science & Technology II	1.00		
					01.0331	Agricultural Science & Technology III	1.00		
					Elective Courses:				
					01.0111	Agricultural Business Management	1.00		
					02.0211	Animal Science & Technology, Entry	1.00		
					02.0241	Animal Science & Technology, Advanced	1.00		
					01.0351	Aquaculture, Introduction	1.00		
					01.0361	Aquaculture, Advanced	1.00		
					02.0251	Dairy Herd Management	1.00		
					02.0221	Equine Science & Technology	1.00		
					02.0411	Plant and Soil Science & Technology, Entry	1.00		
					02.0421	Plant and Soil Science & Technology, Adv.	1.00		
					02.0261	Swine Herd Management	1.00		
					02.0231	Veterinary Assistant	1.00		
					32.0199	Student Internship (Critical Workplace Skills)	.50		
					01.0100	Summer Agriculture Program	.25		
					Supervised Agriculture Experience Program (capstone experience)			3.00 credits for completion	

000106

Business Education – (5 Pathways)

- *Accounting & Finance*
- *Business Administrative Support*
- *Business Entrepreneurship*
- *Business Management*
- *Business Technology Support*

Our Mission: Business Education prepares students for employment and/or continuing education opportunities in business through technical instruction in the classroom, experiential education in the laboratory, student internships, and through leadership and personal development by participating in student leadership organizations.

General Tips:

- Utah Business Education Pathways are based on the national business and finance career cluster pathways.
- The availability of specific course offerings and related pathways vary by school. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students into college business programs. Students should contact their school counselor about specific course offerings and concurrent enrollment opportunities.
- Required foundation courses provide the essential knowledge base for each pathway.

Tips for Teachers and Counselors:

- A variety of elective course offerings provide flexibility to meet the individual interests and needs of students and school scheduling limitations.
- Most introductory courses will meet high school graduation core credit requirements and provide a supportive knowledge base for the pathway participation.

- To complete a pathway, students must complete a total of 3.00 credits. Students must complete the required foundation courses (1.00 credit) and enough elective courses (2.00 credits) to equal the 3.00 credits. Students seeking a career in business should develop high-level skills in math, language arts, social interaction, and science.

- Through the SEOP process, students should plan to complete the necessary courses to transition from high school to college and/or career.

Leadership Opportunities:

The Career and Technical Student Organization for these pathways is FBLA – Future Business Leaders of America. FBLA is an integral part of the instructional program and provides opportunities for students to develop career competence, leadership attributes and social responsibility.

Transition to Post-Secondary and/or Career:

A variety of related Work-Based Learning (WBL) experiences are available in each pathway. WBL experiences allow students to see, firsthand, how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that every student receives the academic knowledge and technical skills needed to be successful in a business career. Business Education students will develop essential career preparation skills through technical and experiential education, as well as personal leadership opportunities.



High School to College and Career Pathway: Secondary

Area of Study: Business Education

Pathway: Accounting & Finance

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																																					
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																																																					
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>																																																																					
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For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005201



High School to College and Career Pathway: Secondary

Area of Study: Business Education

Pathway: Business Administrative Support

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																									
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Workforce Trends According to the U.S. Department of Labor, secretaries and administrative assistants held more than 4.1 million jobs in 2004. This is one of the largest job categories in the U. S. About 9 out of 10 secretaries work in firms providing services. These services range from education and health care to legal and business services.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																																														
Get the Facts In the early days of mechanical typewriters, proficient typists could type so fast that the keys frequently jammed against each other. The familiar but illogical QWERTY keyboard was then developed in an effort to space often-used keys apart to prevent jamming.																																																																		

Sample Occupations	
> Administrative Assistant	
> Customer Service Assistant	
> Desktop Publisher	
> Executive Secretary	
> Office Manager	

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005202



High School to College and Career Pathway: Secondary

Area of Study: Business Education

Pathway: Business Entrepreneurship

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50	Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends To be an entrepreneur you don't need to be a certain age. A lot of teens are successful entrepreneurs. The U.S. Small Business Administration has a Teen Business Link to help teens start, grow, and own a business: http://www.sba.gov/teens/ Get the Facts 70% of the new jobs in America are created by small businesses, and 90% of these businesses are sole proprietorships.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district. Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.			Course #	Introductory Courses: (preferred)	Credit	1.00 credits	
					52.0417	Computer Technology	.50		
					52.0461	Word Processing Basics/Keyboarding	.50		
					Foundation Course: (required)				
					52.0621	Entrepreneurship	.50		
					08.0708	Marketing	.50		
					Elective Courses:				
					52.0312	Accounting I	.50		
					52.0322	Accounting II	.50		
					08.9904	Advertising/Promotion	.50		
52.0813	Banking & Finance	.50	2.00 credits						
52.0511	Business Communications I	.50							
52.0521	Business Communications II	.50							
52.0441	Business Law	.50							
52.0211	Business Management	.50							
52.0311	Business Math	.50							
52.0254	Business Web Page Design	.50							
08.0710	Customer Service	.50							
52.0611	Economics	.50							
08.0211	Leadership Principles	.50							
08.1701	Real Estate	.50	3.00 credits for completion						
08.0903	Sports & Entertainment Marketing	.50							
32.0199	Student Internship (Critical Workplace Skills)	.50							
Sample Occupations > Inventor > Retail Owner/Operator > Sales & Service Owner > Web Developer/Owner > Venture Capitalist For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov									



High School to College and Career Pathway: Secondary

Area of Study: Business Education

Pathway: Business Management

Middle School		State Requirements		High School Suggested Education Plan				College & Careers																																																																		
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32.0199	Student Internship (Critical Workplace Skills)	.50																																																																								

005204



High School to College and Career Pathway: Secondary

Area of Study: Business Education

Pathway: Business Technology Support

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life: 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50				Financial Literacy .50	
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				<p>> Customer Service Assistant</p> <p>> Desktop Publisher</p> <p>> Executive Assistant</p> <p>> Office Manager</p> <p>> Secretary</p> <p>> Web Page Manager</p>
<p>Workforce Trends</p> <p>According to the Utah Department of Workforce Services, a total of 41,000 average annual job openings are expected for administrative assistant positions through the year 2010.</p> <p>Get the Facts</p> <p>The World Wide Web has changed the way we communicate and consume information. Millions of Web pages already exist, with more in the works. However, most people don't possess the technical know-how to launch an eye-catching Web site. For those individuals with Web page design skills, job opportunities should be plentiful.</p> <p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>					Course #	Introductory Courses: (preferred)	Credit	1.00 credits	
					52.0417	Computer Technology	.50		
					52.0461	Word Processing Basics/Keyboarding	.50		
					Foundation Courses: (required)				
					52.0254	Business Web Page Design	.50		
					52.0447	Desktop Publishing I	.50		
					Elective Courses:				
					52.0451	Administrative Procedures	.50		
					52.0511	Business Communications I	.50		
					52.0521	Business Communications II	.50		
					52.0211	Business Management	.50		
					52.0311	Business Math	.50		
					52.0264	Business Web Page Design, Advanced	.50		
					52.0457	Desktop Publishing II	.50		
					52.0419	Electronic Spreadsheets & Databases	.50		
08.0708	Marketing	.50							
52.0471	Word Processing	.50							
32.0199	Student Internship (Critical Workplace Skills)	.50							
					3.00 credits for completion				

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005203

Family & Consumer Sciences Education – (8 Pathways)

- *Child Development*
- *Consumer Economics Services*
- *Family & Human Services*
- *Fashion Design, Manufacturing & Merchandising*
- *Food Science, Dietetics & Nutrition*
- *Food Service & Culinary Arts*
- *Hospitality Services*
- *Interior Design*



Our Mission: Family and Consumer Sciences Education helps prepare students for family life, work life, and careers in family and consumer sciences by providing opportunities to develop the knowledge, skills, attitudes, and behaviors needed through character development, creative and critical thinking, interpersonal communication, practical knowledge, and vocational preparation.

General Tips:

- The Utah Family and Consumer Sciences (FACS) pathways are based on national skills standards and the national cluster pathways for family and consumer science education.
- The availability of specific course offerings and related pathways vary by school. Many family and consumer science courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students into college and university FACS programs.
- By taking Family and Consumer Science courses, all students in each of the CTE career pathways learn core knowledge and skills that prepare them for independent living and the workforce, which increases personal and community well-being.

Tips for Teachers and Counselors:

- To complete a pathway, students must complete the required courses listed, as well as enough credits in the elective courses to equal 3.00 credits total. Students seeking a career in family and consumer sciences should develop high-level skills in math and science.
- Family and Consumer Sciences courses provide foundation skills and the knowledge base to become a family and consumer science teacher.

- By taking culinary arts, food service and hospitality pathways, students may obtain the ProStart and ServSafe certification from the National Restaurant Association and be ready to work in culinary, food service and hospitality careers. Currently this is one of the fastest growing career fields internationally.

- The Child Development Pathway provides the in-depth study of developmentally appropriate practices, brain research, curriculum development and professional employment skills that prepares students for work in early childhood education careers.

- Required coursework in interior design, food science/dietetics, family human services, fashion design/merchandising and consumer economics services provides students with important foundational knowledge and marketable skills for these family and consumer sciences fields.

- Courses in other clusters, such as marketing and trade and technical education, are a part of the elective courses for the family and consumer sciences pathways to augment knowledge and skills in the field of study.

- Teachers can provide family and consumer sciences pathway information to students, parents, and counselors so that students can maximize their educational opportunities in family and consumer sciences fields.

- Through the SEOP process, students may take advantage of courses in family and consumer sciences that will count as science credit toward graduation.

Leadership Opportunities:

The Career and Technical Student Organization for these pathways is FCCLA – Future Career and Community Leaders of America. FCCLA provides students with opportunities to develop leadership, communication skills, personal growth, and family and career success.

Transition to Post-Secondary and/or Career:

A variety of related Work-Based Learning (WBL) experiences are available in each pathway. WBL experiences allow students to see, first hand, how classroom instruction connects to the world of work and future career opportunities.

Our vision is to empower students and families to manage the challenges of living and working in a diverse, global society. Our unique focus is on families, work, and their interrelationships.



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Child Development

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School		
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50					
			Financial Literacy	.50	Financial Literacy .50					
			Computer Tech.	.50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
<p>Workforce Trends</p> <p>Child care workers held about 1.3 million jobs in 2004. About 1 out of 3 child care workers was self-employed. 17% of all child care workers are found in child day care services, and about 21% work for private households.</p> <p>According to the U.S. Department of Labor, employment of child care workers is projected to increase 9 to 17% for all occupations through the year 2014.</p> <p>Get the Facts</p> <p>Nationwide, families pay approximately 60% of their total annual estimated expenditures on child care. Formal child care generates 2.8 billion jobs.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Course #			Foundation Courses: (required)			2.00 credits
				20.0201			Child Care I		1.00	
				20.0102			Child Development		.50	
				20.0108			Food & Nutrition I		.50	1.00 credits
							Elective Courses:			
				20.0211			Child Care II		.50	
				52.0312			Accounting I		.50	
				20.0138			Foundations of Nutrition		.50	
				20.0112			Human Development		1.00	
				20.0212			Early Childhood Internship		.50	
32.0199			Student Internship (Critical Workplace Skills)		.50	3.00 credits for completion				
					<p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>					

<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

002001



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Consumer Economics Services

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School		9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50			Financial Literacy .50		
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				Sample Occupations > Consumer Advocate > Consumer Consultant > Consumer Economist > Credit Counselor > Financial Planner > Product Developer > Product Researcher
Workforce Trends This is a small occupation in the United States, employing approximately 93,000 workers. In Utah, the annual growth rate for this occupation is estimated to be 29%. Get the Facts Financial issues are the most common source of problems within families and couple relationships.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #	Foundation Courses: (required)	Credit	1.50 credits		
				52.0312	Accounting I	.50			
				20.0117	Adult Roles & Financial Literacy	1.00			
						Elective Courses:		1.50 credits	
				08.0710	Customer Service	.50			
				20.0701	Entrepreneurship in FACS	.50			
				32.0199	Student Internship (Critical Workplace Skills)	.50			
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					3.00 credits for completion				
For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov									

There are a number of options for education and training beyond high school, depending on your career goals.

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Consumer Advocate
- > Consumer Consultant
- > Consumer Economist
- > Credit Counselor
- > Financial Planner
- > Product Developer
- > Product Researcher

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

002002



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Family & Human Services

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																														
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																														
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																														
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																																
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)																																
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																															
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																	
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																																		
			Financial Literacy	.50	Financial Literacy .50																																		
			Computer Tech.	.50	Computer Technology .50																																		
CTE Intro 1.00		1.00	Career and Technical Education	1.00																																			
Workforce Trends According to the U.S. Department of Labor, family and community service employees hold about 2.2 million jobs. Some of the fastest growing occupations in the nation are concentrated in the social services, especially those that involve working with the elderly.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				<p>2.00 credits + 1.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>																														
Get the Facts Studies have shown that a harmonious marriage relationship promotes competence and maturity in the couple's children. Other studies have demonstrated that marital conflict may result in cognitive delay, school difficulties, and antisocial or withdrawn behavior.					<table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>20.0137</td><td>Teen Living</td><td>1.00</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>20.0117</td><td>Adult Roles & Financial Literacy</td><td>1.00</td></tr><tr><td>20.0102</td><td>Child Development</td><td>.50</td></tr><tr><td>20.0108</td><td>Food and Nutrition I</td><td>.50</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>20.0138</td><td>Foundations of Nutrition</td><td>.50</td></tr><tr><td>20.0112</td><td>Human Development</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>					Course #	Introductory Courses: (preferred)	Credit	20.0137	Teen Living	1.00	Foundation Courses: (required)			20.0117	Adult Roles & Financial Literacy	1.00	20.0102	Child Development	.50	20.0108	Food and Nutrition I	.50	Elective Courses:			20.0138	Foundations of Nutrition	.50	20.0112	Human Development	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
Course #	Introductory Courses: (preferred)	Credit																																					
20.0137	Teen Living	1.00																																					
Foundation Courses: (required)																																							
20.0117	Adult Roles & Financial Literacy	1.00																																					
20.0102	Child Development	.50																																					
20.0108	Food and Nutrition I	.50																																					
Elective Courses:																																							
20.0138	Foundations of Nutrition	.50																																					
20.0112	Human Development	1.00																																					
32.0199	Student Internship (Critical Workplace Skills)	.50																																					
					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																		

Sample Occupations

- > Child Care Aide/Worker
- > FACS Teacher
- > Preschool Teacher
- > Social Worker
- > Teacher Assistant

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

002003



High School to College and Career Pathway: Secondary
Area of Study: Family & Consumer Sciences Education

Pathway: Fashion Design, Manufacturing & Merchandising

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50			Financial Literacy .50		
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends Employers seek designers with a 2- or 4-year degree who are knowledgeable about textiles, fabrics, ornamentation, and fashion trends. Employment growth for fashion designers will stem from a growing population demanding more clothing, footwear, and accessories. The best job opportunities will be in design firms that design mass market clothing sold in department stores and retail chain stores, such as apparel wholesale firms. Get the Facts In 2004, two-thirds of salaried fashion designers were employed in either New York or California.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #	Foundation Courses: (required)	Credit	1.50 credits	For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov	
				20.0113	Clothing I	.50			
				20.0113	Clothing II	.50			
				20.0306	Fashion Strategies	.50	1.50 credits		
				Elective Courses:					
				08.9904	Advertising & Promotion	.50			
				20.0301	Designer Sewing/Fashion Design	.50			
				20.0701	Entrepreneurship in FACS	.50			
				08.0101	Fashion Merchandising I	.50			
				20.0103	Sports Sewing	.50	3.00 credits for completion		
				32.0199	Student Internship (Critical Workplace Skills)	.50			
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.									



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Food Science, Dietetics, & Nutrition

Middle School			State Requirements		High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Food Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					
			Financial Literacy .50				Financial Literacy .50		
			Computer Tech. .50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education 1.0	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL			<p>1.00 credits</p> <p>2.00 credits</p> <p>3.00 credits for completion</p>		
<p>Workforce Trends Dietitians and nutritionists held about 50,000 jobs in 2004. Employment of dietitians is expected to increase 18 to 26% for all occupations through 2014 as a result of increasing emphasis on disease prevention through improved dietary habits.</p> <p>Get the Facts Researchers don't know why, but people living in mountain states eat 30% more cookies than other people.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Course #	Foundation Courses: (required)	Credit			
				20.0108	Food & Nutrition I	.50			
				20.0118	Food & Nutrition II	.50			
				Elective Courses:					
				20.0102	Child Development	.50			
				20.0128	Food Science	.50			
				20.0138	Foundations of Nutrition	.50			
				20.0112	Human Development	1.00			
				32.0199	Student Internship (Critical Workplace Skills)	.50			
								Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.	

002005



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Food Service & Culinary Arts

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																			
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																			
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																																			
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																																					
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)																																					
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																																				
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																						
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																																							
			Financial Literacy	.50	Financial Literacy .50																																							
			Computer Tech.	.50	Computer Technology .50																																							
CTE Intro 1.00		1.00	Career and Technical Education	1.00																																								
<p>Workforce Trends</p> <p>Chefs, cooks, and food preparation workers held nearly 3.1 million jobs in 2004.</p> <p>Job openings for chefs, cooks, and food preparation workers are expected to be plentiful through the year 2014; however, competition should be fierce for jobs in the top kitchens of higher-end restaurants.</p> <p>Get the Facts</p> <p>Only 19.9% of people employed in the field of Culinary Arts are women.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><thead><tr><th>Course #</th><th>Foundation Courses: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>20.0108</td><td>Food & Nutrition I</td><td>.50</td></tr><tr><td>20.0118</td><td>Food & Nutrition II</td><td>.50</td></tr><tr><td colspan="3">Choose one of the following:</td></tr><tr><td>20.0401</td><td>Food Service/Culinary Arts</td><td>1.00</td></tr><tr><td>20.0411</td><td>Pro Start I</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>20.0701</td><td>Entrepreneurship in FACS</td><td>.50</td></tr><tr><td>20.0601</td><td>Hospitality Services</td><td>.50</td></tr><tr><td>20.0411</td><td>Pro Start II</td><td>1.00</td></tr><tr><td>08.0901</td><td>Travel & Tourism</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p> <p>3.00 credits for completion</p>				Course #	Foundation Courses: (required)	Credit	20.0108	Food & Nutrition I	.50	20.0118	Food & Nutrition II	.50	Choose one of the following:			20.0401	Food Service/Culinary Arts	1.00	20.0411	Pro Start I	1.00	Elective Courses:			20.0701	Entrepreneurship in FACS	.50	20.0601	Hospitality Services	.50	20.0411	Pro Start II	1.00	08.0901	Travel & Tourism	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
Course #	Foundation Courses: (required)	Credit																																										
20.0108	Food & Nutrition I	.50																																										
20.0118	Food & Nutrition II	.50																																										
Choose one of the following:																																												
20.0401	Food Service/Culinary Arts	1.00																																										
20.0411	Pro Start I	1.00																																										
Elective Courses:																																												
20.0701	Entrepreneurship in FACS	.50																																										
20.0601	Hospitality Services	.50																																										
20.0411	Pro Start II	1.00																																										
08.0901	Travel & Tourism	.50																																										
32.0199	Student Internship (Critical Workplace Skills)	.50																																										
<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																																												

002006



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Hospitality Services

Middle School		State Requirements		High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none"> > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	Fine Arts Courses 1.50				
			Financial Literacy				Financial Literacy .50	
			Computer Tech.	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends According to the U.S. Department of Labor, travel and tourism is one of the largest and fastest growing industries in the world. Each year, travel and tourism employers around the world pay more than \$1.6 trillion in wages and salaries and create 12.5 million new jobs. Get the Facts Spending by travelers and visitors accounts for roughly 15 to 30% of revenues at table service restaurants with average check sizes of less than \$25. In some states a travel/tour guide must be licensed.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course # 20.0108 20.0118 Choose one of the following: 20.0401 20.0411 Elective Courses: 20.0701 20.0601 08.0901 20.0411 32.0199	Foundation Courses: (required) Food & Nutrition I Food & Nutrition II Food Service/Culinary Arts Pro Start I Entrepreneurship in FACS Hospitality Services Travel & Tourism Pro Start II Student Internship (Critical Workplace Skills)	Credit .50 .50 1.00 1.00 .50 .50 .50 1.00 .50	2.00 credits 1.00 credits 3.00 credits for completion	
				Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

002007



High School to College and Career Pathway: Secondary

Area of Study: Family & Consumer Sciences Education

Pathway: Interior Design

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																									
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																									
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																																									
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																																											
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)																																											
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																																										
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																												
The Arts .5	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																																													
			Financial Literacy	.50	Financial Literacy .50																																													
			Computer Tech.	.50	Computer Technology .50																																													
CTE Intro 1.00		1.00	Career and Technical Education	1.00	<div><div>Career and Technical Education Recommended Pathway Courses</div><div>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</div><div>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</div><table><thead><tr><th>Course #</th><th>Foundation Courses: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>20.0110</td><td>Interior Design I</td><td>.50</td></tr><tr><td>20.0110</td><td>Interior Design II</td><td>.50</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>15.1303</td><td>Architectural Drafting</td><td>1.00</td></tr><tr><td>20.0113</td><td>Clothing I (Clothing & Textiles)</td><td>.50</td></tr><tr><td>50.0406</td><td>Commercial Photography</td><td>1.00</td></tr><tr><td>50.0401</td><td>Design & Visual Communication</td><td>.50</td></tr><tr><td>20.0301</td><td>Designer Sewing/Fashion Design</td><td>.50</td></tr><tr><td>15.1302</td><td>Drafting/CAD</td><td>1.00</td></tr><tr><td>20.0701</td><td>Entrepreneurship in FACS</td><td>.50</td></tr><tr><td>48.0702</td><td>Furniture Design & Manufacturing</td><td>1.00</td></tr><tr><td>20.0501</td><td>Interior Design, Advanced</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table><div>1.00 credits</div><div>2.00 credits</div><div>3.00 credits for completion</div></div>				Course #	Foundation Courses: (required)	Credit	20.0110	Interior Design I	.50	20.0110	Interior Design II	.50	Elective Courses:			15.1303	Architectural Drafting	1.00	20.0113	Clothing I (Clothing & Textiles)	.50	50.0406	Commercial Photography	1.00	50.0401	Design & Visual Communication	.50	20.0301	Designer Sewing/Fashion Design	.50	15.1302	Drafting/CAD	1.00	20.0701	Entrepreneurship in FACS	.50	48.0702	Furniture Design & Manufacturing	1.00	20.0501	Interior Design, Advanced	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
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Workforce Trends Interior design is a small occupation with a very small number of job openings each year, although employment of interior designers is expected to increase 9 to 17% for all occupations through the year 2014. Economic expansion, growing homeowner wealth, and an increased interest in interior design will increase demand for designers.		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>																																																
Get the Facts Currently, there are approximately 65,000 people in the interior design profession.																																																		

002008

Health Care: Careers that Make a Difference

HEALTH SCIENCE & TECHNOLOGY EDUCATION

Health Science & Technology Education – (11 Pathways)



- *American Sign Language*
- *Biotech Research & Development*
- *Biotechnology*
- *Health Informatics*
- *Medical Office Administrative Assistant*
- *Therapeutic Services*
- *Dental*
- *Emergency Medical Technician (EMT)*
- *Exercise Science/Sports Medicine*
- *Medical Assistant*
- *Nursing*
- *Optical Technician*
- *Pharmacy*
- *Surgical Technician*

Our Mission: Health Science and Technology Education prepares students for employment and/or continuing education opportunities in health care through technical instruction in the classroom, experiential education in the laboratory, Work-Based Learning opportunities at clinical settings, and leadership skills through Health Occupations Students of America (HOSA).

General Tips:

- The Utah Health Science and Technology pathways are based on the national health care skills standards and national health science career cluster pathways.
- Specific course offerings vary by school. Many health science courses are also available at local colleges and ATCs. Students should see their counselors to take advantage of these courses. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students into college health science programs.

Tips for Teachers and Counselors:

- By taking Health Science courses, students can obtain certification and be ready to work in careers such as nurse assisting, medical assisting, dental assisting, pharmacy technician, and emergency medical technician. In addition, through health science courses students can gain an important foundation of knowledge and skills necessary for continued education in health sciences.

- Many of the pathways begin with the Introduction to Health Science course, which provides all students with an awareness of the various career possibilities in health care along with instruction in basic human anatomy and physiology, medical terminology, and diseases and disorders.

- Medical Anatomy and Physiology is a foundation course in many pathways and provides the student with in-depth study and preparation for a variety of health care careers.

- To complete a pathway, students must complete the foundation courses listed, as well as enough credits in the introductory and/or elective courses to equal 3.00 credits total.

- Teachers can provide pathway information to students, parents, and counselors so that students can maximize their educational opportunities in the health care fields.

- It is important for counselors to note that students interested in health care careers should take academic courses that emphasize science and math skills in addition to health sciences courses. Advanced Placement courses can help prepare students for college-level work; however, most AP credits will not be allowed to take the place of pre-requisites for entrance to medical school. Through the SEOP process students may take advantage of courses in health science that will count as science credit toward graduation.

Leadership Opportunities:

The Career and Technical Student Organization for these pathways is HOSA – Health Occupations Students of America. HOSA provides students with opportunities to develop leadership and communication skills, self-confidence, and an understanding of current health care issues.

Transition to Post-Secondary and/or Career:

Work-Based Learning opportunities in the pathway are strongly encouraged.

Our vision is to provide awareness and exploration experiences that motivate students to pursue a profession in health care. Once students are motivated, it is our intent to prepare students for continued education and/or employment opportunities in health care.



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: American Sign Language

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Sys. or Biology 1.00	Chemistry 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50	Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends Many interpreters work part time. Those who are on salary usually work full time (40 hours a week). However, if an interpreter is a freelancer, it can be difficult to find a job that provides more than 30 hours a week, although the more mobile you are the more opportunities there will be. Get the Facts American Sign Language was first developed around 1817, after the first American school for the deaf opened in Connecticut. American Sign Language was adapted from the French system of signing by Thomas Gallaudet and Laurent Clerc.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #		Introductory Courses: (preferred)		Credit	2.00 credits + 1.00 credit from introductory or elective courses 3.00 credits for completion
				51.1105		Health Science, Introduction		.50	
						Foundation Courses: (required)			
				51.0205		American Sign Language I		1.00	
				51.0205		American Sign Language II		1.00	
						Elective Courses:			
				51.1316		Health Science, Advanced (capstone course)		1.00	
				32.0199		Student Internship (Critical Workplace Skills)		.50	
					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				
For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov									

Beyond High School

There are a number of options for education and training beyond high school, depending on your career goals.

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Audiologist
- > Sign Language Interpreter/Translator
- > Speech-Language Pathologist

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005101



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Biotech Research & Development Biotechnology

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																										
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																										
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training <p>Sample Occupations</p> <ul style="list-style-type: none">> Biochemist> Biotechnology Technician> Immunohematologist> Laboratory Asst.> Microbiologist> Toxicologist <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																										
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry 1.00	Intermediate Algebra 1.00	Pre-calculus 1.00	Calculus or Statistics 1.00																											
Science .50	Science 1.00	1.50	Science	2.00	Earth Sys. or Biology 1.00	Chemistry 1.00	(1 additional credit -- class of 2011)																												
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																											
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																													
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CTE Intro 1.00		1.00	Career and Technical Education	1.00	<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><td></td><td>Foundation Courses: (required)</td><td></td></tr><tr><td>51.1099</td><td>Biotechnology</td><td>1.00</td></tr><tr><td></td><td>Elective Courses:</td><td></td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p> <p>1.00 credits + 2.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>					Course #	Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50		Foundation Courses: (required)		51.1099	Biotechnology	1.00		Elective Courses:		51.1315	Medical Anatomy & Physiology	1.00	51.1315	Medical Terminology	.50	51.1316	Health Science, Advanced (capstone course)	1.00	32.0199	Student Internship (Critical Workplace Skills)
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32.0199	Student Internship (Critical Workplace Skills)	.50																																	
<p>Workforce Trends</p> <p>While biotechnology is still in its infancy, it is a dynamic career field that is expanding by leaps and bounds. "Biotechnology has become the centerpiece of therapy of all ailments, from heart disease and cancers to the common cold," says Carl B. Feldbaum, president of the Biotechnology Industry Organization (BIO).</p> <p>Get the Facts</p> <p>Biotechnology is predicted to be one of the most important applied sciences of the 21st century.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>																																	

005102



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Health Informatics

Medical Office Administrative Assistant

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training</p>	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					
			Financial Literacy .50	Financial Literacy .50					
			Computer Tech. .50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education 1.00						
Workforce Trends According to the Utah Department of Workforce Services, a total of 11,000 average annual job openings are expected for this occupation through the year 2010.		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Career and Technical Education Recommended Pathway Courses			<p>1.00 credits + 2.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>		
Get the Facts As insurance policies become more intricate, and as government sets more guidelines and creates new laws surrounding the profession, there is an increased need for administrative help within hospitals, clinics, and other medical offices.				(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)					
				CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
				Course #	Introductory Courses: (preferred)	Credit			
				51.1105	Health Science, Introduction	.50			
					Foundation Courses: (required)				
				51.0703	Medical Office Administrative Assistant	1.00			
					Elective Courses:				
				51.1315	Medical Anatomy & Physiology	1.00			
				51.0707	Medical Records Technician	.50			
				51.1315	Medical Terminology	.50			
				51.0708	Medical Transcription	1.00			
				51.1316	Health Science, Advanced (capstone course)	1.00			
				32.0199	Student Internship (Critical Workplace Skills)	.50			
						Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.			

<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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005107



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Dental

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																												
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																												
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																												
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	Pre-calculus 1.00	Statistics or Calculus 1.00																													
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CTE Intro 1.00		1.00	Career and Technical Education	1.00																																	
Workforce Trends <p>The dental industry is in critical need of dental assistants. Dentists are hiring more assistants to perform routine tasks so that they may devote more time to complex procedures. Employment for dental assistants is expected to increase 27% through the year 2014.</p> Get the Facts <p>Research shows that chronic gum disease leads to the release of inflammatory substances and bacteria into the blood stream, which leads to heart disease.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p> <p>In Utah, a dental hygienist and a dentist must be licensed.</p>			Career and Technical Education Recommended Pathway Courses <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL <table><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><td></td><td>Foundation Courses: (required)</td><td></td></tr><tr><td>51.0601</td><td>Dental Assistant</td><td>2.00</td></tr><tr><td></td><td>Elective Courses:</td><td></td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>				Course #	Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50		Foundation Courses: (required)		51.0601	Dental Assistant	2.00		Elective Courses:		51.1315	Medical Anatomy & Physiology	1.00	51.1315	Medical Terminology	.50	51.1316	Health Science, Advanced (capstone course)	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>2.00 credits + 1.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>	
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32.0199	Student Internship (Critical Workplace Skills)	.50																																			

Sample Occupations

- > Dental Assistant
- > Dental Ceramist
- > Dental Hygienist
- > Dental Laboratory Technician
- > Dentist
- > Orthodontic Technician

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005103



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services

Emergency Medical Technician (EMT)

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																														
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																															
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																															
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<p>Workforce Trends A growing and urbanized population will demand more emergency services, increasing the demand for professional emergency medical technicians (EMT) and paramedics. In Utah, the annual growth rate for EMTs is estimated to be 39%.</p> <p>Get the Facts There are approximately 750,000 EMTs across the nation. EMT-Basics comprise 71% of this total; EMT-Intermediates 7%; and EMT-Paramedics 22%.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		<table><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><td>51.0911</td><td>Emergency Medical Services, Introduction</td><td>.50</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>51.0904</td><td>Emergency Medical Technician</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>			Course #		Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50	51.0911	Emergency Medical Services, Introduction	.50	Foundation Courses: (required)			51.0904	Emergency Medical Technician	1.00	Elective Courses:			51.1315	Medical Anatomy & Physiology	1.00	51.1315	Medical Terminology	.50	51.1316	Health Science, Advanced (capstone course)	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>1.00 credits + 2.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>	
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005104



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services

Exercise Science/Sports Medicine

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																												
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Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	Pre-calculus or Statistics 1.00																														
Science .50	Science 1.00	1.50	Science	2.00	Earth Sys. or Biology 1.00	Chemistry 1.00	Physics 1.00																														
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P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																															
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																																
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CTE Intro 1.00		1.00	Career and Technical Education	1.00																																	
<p>Workforce Trends</p> <p>Job growth will be concentrated in health care industry settings, such as ambulatory health care services and hospitals.</p> <p>Get the Facts</p> <p>Physical Therapy is ranked among the top 10 fields, and is expected to remain a top field well into the 21st century.</p> <p>In Utah, a physical therapist, physician, and physician assistant must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>51.0809</td><td>Exercise Science/Sports Medicine</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p> <p>3.00 credits for completion</p>					Course #	Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50	Foundation Courses: (required)			51.0809	Exercise Science/Sports Medicine	1.00	51.1315	Medical Anatomy & Physiology	1.00	Elective Courses:			51.1315	Medical Terminology	.50	51.1316	Health Science, Advanced (capstone course)	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>Sample Occupations</p> <p>> Athletic Trainer</p> <p>> Physical Therapist</p> <p>> Physical Therapist Assistant</p> <p>> Physical Therapist Aide</p> <p>> Massage Therapist</p> <p>> Physician</p> <p>> Physician Assistant</p> <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>	
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005105



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Medical Assistant

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50	Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends A growing and aging population and technological advances in medicine make this one of the fastest growing occupations through the year 2014. According to the Utah Department of Workforce Services, a total of 27,000 average annual job openings are expected for this occupation through the year 2010. Get the Facts Medical assistants held about 387,000 jobs in 2004.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #		Introductory Courses: (preferred)		Credit	
				51.1105		Health Science, Introduction		.50	
						Foundation Courses: (required)			
				51.0801		Medical Assistant		2.00	
						Elective Courses:			
				1.1315		Medical Anatomy & Physiology		1.00	
				51.1315		Medical Terminology		.50	
				51.1316		Health Science, Advance (capstone course)		1.00	
				32.0199		Student Internship (Critical Workplace Skills)		.50	
								2.00 credits + 1.00 credit from introductory or elective courses	
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				Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					

There are a number of options for education and training beyond high school, depending on your career goals.

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Certified Nurse Assistant (CNA)
- > Licensed Practical Nurse (LPN)
- > Medical Assistant
- > Registered Nurse (RN)

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005106



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Nursing

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																		
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																																		
Language Arts 7 1.0	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>																																																		
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P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50																																																					
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CTE Intro 1.00		1.00	Career and Technical Education	1.00																																																							
Workforce Trends <p>Health care is the largest and fastest-growing industry in the United States, employing over 10 million workers in more than 200 careers.</p> Get the Facts <p>In the U.S., registered nurses held approximately 2.4 million jobs in 2004, making registered nursing the largest health care occupation. About 3 out of 5 RN jobs are in hospitals, in inpatient and outpatient departments.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			<table><tr><th colspan="3">Career and Technical Education Recommended Pathway Courses</th></tr><tr><td colspan="3">(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</td></tr><tr><th colspan="3">CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</th></tr><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><th colspan="3">Foundation Courses: (required)</th></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1614</td><td>Nurse Assistant</td><td>.50</td></tr><tr><th colspan="3">Elective Courses:</th></tr><tr><td>20.0108</td><td>Food & Nutrition I</td><td>.50</td></tr><tr><td>20.0118</td><td>Food & Nutrition II</td><td>.50</td></tr><tr><td>20.0138</td><td>Foundations of Nutrition</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>20.0112</td><td>Human Development</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>				Career and Technical Education Recommended Pathway Courses			(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)			CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL			Course #	Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50	Foundation Courses: (required)			51.1315	Medical Terminology	.50	51.1614	Nurse Assistant	.50	Elective Courses:			20.0108	Food & Nutrition I	.50	20.0118	Food & Nutrition II	.50	20.0138	Foundations of Nutrition	.50	51.1316	Health Science, Advanced (capstone course)	1.00	20.0112	Human Development	1.00	51.1315	Medical Anatomy & Physiology	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	1.00 credits + 2.00 credit from introductory or elective courses		3.00 credits for completion
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Sample Occupations

- > Certified Nurse Assistant (CNA)
- > Licensed Practical Nurse (LPN)
- > Medical Assistant
- > Registered Nurse (RN)

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005108



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Optical Technician

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																									
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																										
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<p>Workforce Trends</p> <p>Job openings for optical technicians are expected to be limited because the occupation is small.</p> <p>Get the Facts</p> <p>The American Optometric Association says about 70% of people who use computers every day will develop vision problems such as dry eye.</p> <p>The Vision Council of America estimates that about 62% of U.S. residents have vision defects.</p> <p>In Utah, an optometrist and ophthalmologist must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>																																

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

Sample Occupations

- > Optician Lab. Tech.
- > Ophthalmic Lab. Technician
- > Lathe Operator
- > Lens Mounter II
- > Lens Polisher
- > Optical Instrument Assembler
- > Optical Technician

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005109



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Pharmacy

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																										
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																											
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)																											
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry 1.00	Intermediate Algebra 1.00	Pre-calculus 1.00	Calculus or Statistics 1.00																											
Science .50	Science 1.00	1.50	Science	2.00	Earth Sys. or Biology 1.00	Chemistry 1.00	Physics 1.00																												
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																											
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																													
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																														
			Financial Literacy	.50		Financial Literacy .50																													
			Computer Tech.	.50	Computer Technology .50																														
CTE Intro 1.00		1.00	Career and Technical Education	1.00	<div>Career and Technical Education Recommended Pathway Courses</div> <div>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</div> <div>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</div> <table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>51.1105</td><td>Health Science, Introduction</td><td>.50</td></tr><tr><td></td><td>Foundation Courses: (required)</td><td></td></tr><tr><td>51.0805</td><td>Pharmacy Technician</td><td>2.00</td></tr><tr><td></td><td>Elective Courses:</td><td></td></tr><tr><td>51.1315</td><td>Medical Anatomy & Physiology</td><td>1.00</td></tr><tr><td>51.1315</td><td>Medical Terminology</td><td>.50</td></tr><tr><td>51.1316</td><td>Health Science, Advanced (capstone course)</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <div>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</div> <div>3.00 credits for completion</div>				Course #	Introductory Courses: (preferred)	Credit	51.1105	Health Science, Introduction	.50		Foundation Courses: (required)		51.0805	Pharmacy Technician	2.00		Elective Courses:		51.1315	Medical Anatomy & Physiology	1.00	51.1315	Medical Terminology	.50	51.1316	Health Science, Advanced (capstone course)	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
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<div>Workforce Trends</div> <div>Pharmacy Technician:</div> <div>With increased medical needs of an aging population and additional tasks given to pharmacy techs., many job opportunities will be created, especially for those with formal training and certification.</div> <div>Pharmacist:</div> <div>New opportunities are emerging for pharmacists in managed care organizations, where they analyze trends and patterns in medication use, and in pharmacoeconomics—the cost and benefit analysis of different drug therapies.</div> <div>Get the Facts</div> <div>Pharmaceutical makers are accustomed to a research-to-market cycle of as long as 10 years in order to discover, develop and commercially launch a new drug.</div>		<div>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</div> <div>Concurrent enrollment course offerings vary by school and district.</div> <div>In Utah, a pharmacist must be licensed.</div>																																	

There are a number of options for education and training beyond high school, depending on your career goals.

> Certificate

> Associate degree

> Bachelor degree

> Professional degree

> On-the-job training

> Apprenticeship

> Military training

Sample Occupations

> Pharmacy Aide

> Pharmacy Technician

> Pharmacist

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

005110



High School to College and Career Pathway: Secondary

Area of Study: Health Science & Technology Education

Pathway: Therapeutic Services Surgical Technician

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																											
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																											
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Workforce Trends Demand for surgical technicians will rise as the population ages and as new technologies allow for more and varied surgeries. Hospitals will remain the primary employer, but physician offices and clinics, including ambulatory surgical centers, will provide most new jobs. Get the Facts Surgical technicians are commonly referred to as "scrubs." More than three-fourths of scrubs work in a hospital setting, with the exception of private scrubs who are employed directly by surgeons for special teams – like transplant work.																																				
Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																															

Sample Occupation
> Surgical Technician

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

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005111

Providing the Foundation for Utah's High-Tech Workforce

INFORMATION TECHNOLOGY EDUCATION

Information Technology Education – (6 Pathways)

Information Support & Services

- Database Development & Administration
- Technical Support

Interactive Media

- Digital Media (Multimedia)
- Web Development & Administration
- Network Systems
- Programming/Software Development

Our Mission: Information Technology (IT) Education prepares students for employment and/or continuing education opportunities in the growing field of information technology in partnership with industry.

General Tips:

- The Utah Information Technology (IT) Education pathways are based on the national skills standards, where applicable, and established state standards.
- Specific course offerings vary by school. Many IT courses are also available at local colleges and ATCs. Students should see their school counselors to take advantage of these courses. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students in the IT programs at the college level.

Tips for Teachers and Counselors:

- By taking IT courses, students can obtain industry certification and be ready to work in careers such as computer programming and computer networking.
- To complete a pathway, students must complete the foundation courses listed that generally equal 3.0 total credits.
- Utah's IT education program is a charter member of the U.S. Department of Education's Information Technology Career Cluster Consortium.
- It is important for counselors to note that students interested in careers in IT should also take academic courses that emphasize science and math skills as they relate to IT.

Leadership Opportunities:

Utah IT students who want to participate in a leadership organization should choose from the following organizations, depending on what is available at their school: Future Business Leaders of America (FBLA), SkillsUSA, and Technology Student Association (TSA).

Transition to Post-Secondary and/or Career:

- Each pathway in Information Technology Education is a sequence of courses that prepares individuals to apply technical knowledge and skills necessary to enter their chosen field of study and increase their earning potential while still in high school and later, as they pursue post-secondary education.
- Preparation for post-secondary education and concurrent enrollment articulation are also high priorities of each IT pathway.
- A variety of Work-Based Learning (WBL) experiences should be implemented throughout the pathway. WBL experiences allow students to see how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that every student interested in an IT career receives the academic knowledge and foundational technical skills needed to be successful in the IT career field of his or her choice and post-secondary education.





High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Information Support & Services Database Development & Administration

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																	
7 th Grade	8 th Grade	Middle School	High School		9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																	
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Workforce Trends Computer systems analysts, database administrators, and computer scientists are expected to be among the fastest growing occupations through the year 2012.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.																																								
Get the Facts Information Technology workers are needed in nearly every industry. The demand for technically skilled workers is growing in almost every industry, not just in those considered high-tech.																																										
		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																								

Beyond High School

There are a number of options for education and training beyond high school, depending on your career goals.

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Database Administrator
- > Database Architect
- > Database Design Analyst
- > Database Developer
- > Database Engineer
- > Information Scientist

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

001101



High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Information Support & Services Technical Support

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50				
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					
			Financial Literacy .50	Financial Literacy .50					
			Computer Tech. .50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education 1.00	Career and Technical Education Recommended Pathway Courses			<p>2.00 credits + 1.00 credit from introductory or elective courses</p>		
<p>Workforce Trends</p> <p>Growth will be driven by rapid increases in the computer and data processing services industry. Employment prospects should be favorable, especially for candidates who have either a degree in computer science or computer engineering.</p> <p>Get the Facts</p> <p>Technical support positions are in high demand both in IT and non-IT companies. Non-IT companies represent 79% of employment for IT workers.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)					
				CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
				Course #	Introductory Courses: (preferred)	Credit			
				52.0417	Computer Technology	.50			
				11.0101	Information Technology, Introduction	.50			
				Foundation Courses: (required)					
				11.9920	A+ (Computer Maintenance)	1.00			
				Choose one of the following courses:					
				11.9940	Linux Fundamentals	1.00			
				11.0440	Network+	.50			
11.0410	Novell CNA	1.00							
11.0450	Security Fundamentals	.50							
Elective Courses:									
32.0199	Student Internship (Critical Workplace Skills)	.50							
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					3.00 credits for completion				

<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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001105



High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Interactive Media

Digital Media (Multimedia)

Middle School		State Requirements		High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50				
			Financial Literacy .50				Financial Literacy .50	
			Computer Tech. .50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education 1.00					
Workforce Trends Multimedia is the field of the future and is rapidly growing. Because our global economy is driven by technology, multimedia has become one of the most in-demand fields around. With nearly 75% of Americans using the Internet and over 85 million domains registered worldwide, the demand for individuals skilled in interactive media is high.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				2.00 credits + 1.00 credit from introductory or elective courses



High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Interactive Media Web Development & Administration

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																							
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																							
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																																							
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Workforce Trends The World Wide Web has changed the way we communicate and consume information. Millions of Web pages already exist, with more in the works. However, most people don't possess the technical know-how to launch an eye-catching Web site. That's the reason so many self-employed Web site designers are taking advantage of plentiful opportunities in this line of work.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				Sample Occupations <ul style="list-style-type: none">> Internet Project Manager> Webmaster> Web Administrator> Web Developer> Web Graphic Designer> Web Programmer/Analyst For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov																																							
Get the Facts The American Institute of Graphic Arts reports that nine out of 10 artists have a college degree, most with a major in graphic design.					<table><thead><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr></thead><tbody><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>11.0101</td><td>Information Technology, Introduction</td><td>.50</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>11.0230</td><td>Web Development I</td><td>1.00</td></tr><tr><td colspan="3">Choose one of the following courses:</td></tr><tr><td>11.0201</td><td>Computer Programming</td><td>1.00</td></tr><tr><td>11.0210</td><td>Multimedia I</td><td>1.00</td></tr><tr><td>11.0230</td><td>Web Development II</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>52.0264</td><td>Business Web Design, Advanced</td><td>.50</td></tr><tr><td>11.0301</td><td>Database Development I</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>					Course #	Introductory Courses: (preferred)	Credit	52.0417	Computer Technology	.50	11.0101	Information Technology, Introduction	.50	Foundation Courses: (required)			11.0230	Web Development I	1.00	Choose one of the following courses:			11.0201	Computer Programming	1.00	11.0210	Multimedia I	1.00	11.0230	Web Development II	1.00	Elective Courses:			52.0264	Business Web Design, Advanced	.50	11.0301	Database Development I	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
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001106



High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Network Systems

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																									
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<p>Workforce Trends Growth will be driven by rapid increases in the computer and data processing services industry.</p> <p>Get the Facts The term "computer bug" was coined in the 1940s, when an insect got into a relay in a primitive electromechanical computer, causing computer malfunctions.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		<table><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>11.0101</td><td>Information Technology, Introduction</td><td>.50</td></tr><tr><td colspan="2">Foundation Courses: (required)</td><td></td></tr><tr><td colspan="2">Choose 1.5 credits from the following courses:</td><td></td></tr><tr><td>11.0410</td><td>Certified Novell Administrator (CNA)</td><td>1.00</td></tr><tr><td>11.0420</td><td>Cisco Certified Network Administrator (CCNA)</td><td>1.00</td></tr><tr><td>11.0430</td><td>Microsoft Certified Professional (MCP)</td><td>1.00</td></tr><tr><td>11.0440</td><td>Network +</td><td>.50</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>11.9920</td><td>A+ (Computer Maintenance)</td><td>1.00</td></tr><tr><td>11.9940</td><td>Linux Fundamentals</td><td>1.00</td></tr><tr><td>11.0450</td><td>Security Fundamentals</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>				Course #	Introductory Courses: (preferred)		Credit	52.0417	Computer Technology	.50	11.0101	Information Technology, Introduction	.50	Foundation Courses: (required)			Choose 1.5 credits from the following courses:			11.0410	Certified Novell Administrator (CNA)	1.00	11.0420	Cisco Certified Network Administrator (CCNA)	1.00	11.0430	Microsoft Certified Professional (MCP)	1.00	11.0440	Network +	.50	Elective Courses:			11.9920	A+ (Computer Maintenance)	1.00	11.9940	Linux Fundamentals	1.00	11.0450	Security Fundamentals	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
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<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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001103



High School to College and Career Pathway: Secondary

Area of Study: Information Technology Education

Pathway: Programming/Software Development

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<p>Workforce Trends</p> <p>Demand for programmers to help organizations keep up with changing technology will continue. Prospects should be best for college graduates with knowledge of various programming languages and tools; those with less formal education or work experience should face keen competition.</p> <p>Get the Facts</p> <p>Programmers represent the largest size group of IT workers. A total of 22,000 average annual job openings are expected for computer programmers through the year 2010.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><tr><th>Course #</th><th>Introductory Courses: (preferred)</th><th>Credit</th></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>11.0101</td><td>Information Technology, Introduction</td><td>.50</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>11.0201</td><td>Computer Programming I</td><td>1.00</td></tr><tr><td colspan="3">Choose one of the following courses:</td></tr><tr><td>11.0202</td><td>Computer Programming II</td><td>1.00</td></tr><tr><td>11.0301</td><td>Database Development I</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>11.0210</td><td>Multimedia I: Design & Development</td><td>1.00</td></tr><tr><td>11.0230</td><td>Web Development II</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p> <p>2.00 credits + 1.00 credit from introductory or elective courses</p> <p>3.00 credits for completion</p>				Course #	Introductory Courses: (preferred)	Credit	52.0417	Computer Technology	.50	11.0101	Information Technology, Introduction	.50	Foundation Courses: (required)			11.0201	Computer Programming I	1.00	Choose one of the following courses:			11.0202	Computer Programming II	1.00	11.0301	Database Development I	1.00	Elective Courses:			11.0210	Multimedia I: Design & Development	1.00	11.0230	Web Development II	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
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001104

Marketing Education – (4 Pathways)

- *Marketing Entrepreneurship*
- *Marketing Management*
- *Sales & Service Marketing*
- *Travel & Tourism*

Our Mission: Marketing Education is designed to prepare students for employment and/or continuing education opportunities in marketing through classroom instruction, experiential education, student internships, and through leadership and personal development by participating in student leadership organizations. Students will learn skills in developing, promoting, and distributing products in order to satisfy customer needs and wants.

General Tips:

- Utah Marketing Education Pathways are based on the national marketing sales and service career cluster pathways. The availability of specific course offerings and related pathways vary by school. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students into college marketing programs. Students should contact their school counselors about specific course offerings and concurrent enrollment opportunities.
- Required foundation courses provide the essential knowledge base for each pathway.

Tips for Teachers and Counselors:

- A variety of elective course offerings provide flexibility to meet the individual interests and needs of students and school scheduling limitations.
- Most introductory courses will meet high school graduation core credit requirements and provide a supportive knowledge base for pathway participation.

- To complete a pathway, students must complete a total of 3.00 credits. Students must complete the required foundation courses (1.00 credit) and enough elective courses (2.00 credits) to equal the 3.00 credits. Students seeking a career in marketing should develop high-level skills in math, language arts, social interaction, and science.

- Through the SEOP process, students should plan to complete the necessary courses to transition from high school to college and/or career.

Leadership Opportunities:

The Career and Technical Student Organization for these pathways is DECA – an association of marketing students. DECA is an integral part of the instructional program and provides opportunities for students to develop career competence, leadership attributes and social responsibility.

Transition to Post-Secondary and/or Career:

A variety of related Work-Based Learning (WBL) experiences are available in each pathway. WBL experiences allow students to see, firsthand, how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that every student receives the academic knowledge and technical skills needed to be successful in a marketing career. Marketing Education students will develop essential career preparation skills through technical and experiential education, as well as personal leadership opportunities.

High School to College and Career Pathway: Secondary Area of Study: Marketing Education



Pathway: Marketing Entrepreneurship

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																																																		
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Workforce Trends <p>To be an entrepreneur you don't need to be a certain age. A lot of teens are successful entrepreneurs. The U.S. Small Business Administration has a Teen Business Link to help teens start, grow, and own a business: http://www.sba.gov/teens/</p> Get the Facts <p>70% of the new jobs in America are created by small businesses, and 90% of these businesses are sole proprietorships.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>		<table><tr><th colspan="3">Career and Technical Education Recommended Pathway Courses</th></tr><tr><td colspan="3">(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</td></tr><tr><th colspan="3">CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</th></tr><tr><th>Course #</th><th>Introductory Course: (preferred)</th><th>Credit</th></tr><tr><td>08.0707</td><td>Marketing, Introduction (7-9 grade)</td><td>.50</td></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>52.0461</td><td>Word Processing Basic/Keyboarding</td><td>.50</td></tr><tr><th colspan="3">Foundation Courses: (required)</th></tr><tr><td>08.0301</td><td>Entrepreneurship</td><td>.50</td></tr><tr><td>08.0708</td><td>Marketing</td><td>.50</td></tr><tr><th colspan="3">Elective Courses:</th></tr><tr><td>52.0312</td><td>Accounting I</td><td>.50</td></tr><tr><td>52.0322</td><td>Accounting II</td><td>.50</td></tr><tr><td>08.9904</td><td>Advertising/Promotion</td><td>.50</td></tr><tr><td>52.0813</td><td>Banking & Finance</td><td>.50</td></tr><tr><td>52.0511</td><td>Business Communications I</td><td>.50</td></tr><tr><td>52.0521</td><td>Business Communications II</td><td>.50</td></tr><tr><td>52.0441</td><td>Business Law</td><td>.50</td></tr><tr><td>52.0211</td><td>Business Management</td><td>.50</td></tr><tr><td>52.0311</td><td>Business Math</td><td>.50</td></tr><tr><td>52.0254</td><td>Business Web Page Design</td><td>.50</td></tr><tr><td>08.0710</td><td>Customer Service</td><td>.50</td></tr><tr><td>08.0601</td><td>Economics</td><td>.50</td></tr><tr><td>08.0211</td><td>Leadership Principles</td><td>.50</td></tr><tr><td>08.1701</td><td>Real Estate</td><td>.50</td></tr><tr><td>08.0903</td><td>Sports & Entertainment Marketing</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>					Career and Technical Education Recommended Pathway Courses			(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)			CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL			Course #	Introductory Course: (preferred)	Credit	08.0707	Marketing, Introduction (7-9 grade)	.50	52.0417	Computer Technology	.50	52.0461	Word Processing Basic/Keyboarding	.50	Foundation Courses: (required)			08.0301	Entrepreneurship	.50	08.0708	Marketing	.50	Elective Courses:			52.0312	Accounting I	.50	52.0322	Accounting II	.50	08.9904	Advertising/Promotion	.50	52.0813	Banking & Finance	.50	52.0511	Business Communications I	.50	52.0521	Business Communications II	.50	52.0441	Business Law	.50	52.0211	Business Management	.50	52.0311	Business Math	.50	52.0254	Business Web Page Design	.50	08.0710	Customer Service	.50	08.0601	Economics	.50	08.0211	Leadership Principles	.50	08.1701	Real Estate	.50	08.0903	Sports & Entertainment Marketing	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>1.00 credits</p> <p>2.00 credits</p> <p>3.00 credits for completion</p>	Sample Occupations <p>> Inventor</p> <p>> Retail Owner/Operator</p> <p>> Sales & Service Owner</p> <p>> Web Developer/Owner</p> <p>> Venture Capitalist</p> <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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High School to College and Career Pathway: Secondary

Area of Study: Marketing Education

Pathway: Marketing Management

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																																					
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Workforce Trends Advertising, marketing, promotions, public relations, and sales manager jobs are highly coveted and will be sought by other managers or highly experienced professionals, resulting in keen competition. College graduates with related experience, a high level of creativity, and strong communication skills should have the best job opportunities. In particular, employers will seek those who have the computer skills to conduct advertising, marketing, promotions, public relations, and sales activities on the Internet.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				<p>Sample Occupations</p> <ul style="list-style-type: none">> Advertising Account Executive> Advertising Production Manager> Brand Manager> Marketing Manager> Market Research Analyst> Promotions Manager> Public Relations Account Executive <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																																																																					
Get the Facts According to the U.S. Department of Labor, advertising, marketing, promotions, public relations, and sales managers held about 646,000 jobs in 2004.		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.			<table><tr><th>Course #</th><th>Introductory Course: (preferred)</th><th>Credit</th></tr><tr><td>08.0707</td><td>Marketing, Introduction (7-9 grade)</td><td>.50</td></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>52.0461</td><td>Word Processing Basic/Keyboarding</td><td>.50</td></tr><tr><td colspan="3">Foundation Courses: (required)</td></tr><tr><td>52.0211</td><td>Business Management</td><td>.50</td></tr><tr><td>08.0708</td><td>Marketing</td><td>.50</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>52.0312</td><td>Accounting I</td><td>.50</td></tr><tr><td>52.0322</td><td>Accounting II</td><td>.50</td></tr><tr><td>52.0813</td><td>Banking & Finance</td><td>.50</td></tr><tr><td>52.0511</td><td>Business Communications I</td><td>.50</td></tr><tr><td>52.0521</td><td>Business Communications II</td><td>.50</td></tr><tr><td>52.0441</td><td>Business Law</td><td>.50</td></tr><tr><td>52.0311</td><td>Business Math</td><td>.50</td></tr><tr><td>52.0254</td><td>Business Web Page Design</td><td>.50</td></tr><tr><td>08.0802</td><td>e-Commerce</td><td>.50</td></tr><tr><td>08.0601</td><td>Economics</td><td>.50</td></tr><tr><td>52.0419</td><td>Electronic Spreadsheets & Databases</td><td>.50</td></tr><tr><td>08.0301</td><td>Entrepreneurship</td><td>.50</td></tr><tr><td>08.0211</td><td>Leadership Principles</td><td>.50</td></tr><tr><td>08.0903</td><td>Sports & Entertainment Marketing</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>					Course #	Introductory Course: (preferred)	Credit	08.0707	Marketing, Introduction (7-9 grade)	.50	52.0417	Computer Technology	.50	52.0461	Word Processing Basic/Keyboarding	.50	Foundation Courses: (required)			52.0211	Business Management	.50	08.0708	Marketing	.50	Elective Courses:			52.0312	Accounting I	.50	52.0322	Accounting II	.50	52.0813	Banking & Finance	.50	52.0511	Business Communications I	.50	52.0521	Business Communications II	.50	52.0441	Business Law	.50	52.0311	Business Math	.50	52.0254	Business Web Page Design	.50	08.0802	e-Commerce	.50	08.0601	Economics	.50	52.0419	Electronic Spreadsheets & Databases	.50	08.0301	Entrepreneurship	.50	08.0211	Leadership Principles	.50	08.0903	Sports & Entertainment Marketing	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
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000801



High School to College and Career Pathway: Secondary

Area of Study: Marketing Education

Pathway: Sales & Service Marketing

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																							
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Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																																																							
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Workforce Trends Employment opportunities for those pursuing a career in sales and service marketing will be best for those with a college degree. Appropriate knowledge or technical expertise, along with strong social skills, will be necessary for successful selling.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				Sample Occupations <ul style="list-style-type: none">> Merchandise Displayer> Purchasing Agent> Purchasing Manager> Retail Sales Manager> Sales Development Coordinator> Wholesale/Retail Broker> Wholesale/Retail Buyer																																																							
Get the Facts According to the U.S. Department of Labor, more than 23 million Americans are employed in the retailing industry in more than 2 million retail establishments.		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.			<table><tr><th>Course #</th><th>Introductory Course: (preferred)</th><th>Credit</th></tr><tr><td>08.0707</td><td>Marketing, Introduction (7-9 grade)</td><td>.50</td></tr><tr><td>52.0511</td><td>Business Communications I</td><td>.50</td></tr><tr><td>52.0521</td><td>Business Communications II</td><td>.50</td></tr><tr><td>52.0311</td><td>Business Math</td><td>.50</td></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>52.0461</td><td>Word Processing Basic/Keyboarding</td><td>.50</td></tr><tr><td colspan="2">Foundation Courses: (required)</td><td></td></tr><tr><td>08.0708</td><td>Marketing</td><td>.50</td></tr><tr><td>08.0705</td><td>Retailing or Student Store</td><td>.50</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>08.9904</td><td>Advertising/Promotion</td><td>.50</td></tr><tr><td>08.0710</td><td>Customer Service</td><td>.50</td></tr><tr><td>08.0802</td><td>e-Commerce</td><td>.50</td></tr><tr><td>08.0101</td><td>Fashion Merchandising</td><td>.50</td></tr><tr><td>08.0705</td><td>Retail Management</td><td>.50</td></tr><tr><td>08.0903</td><td>Sports & Entertainment Marketing</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>					Course #	Introductory Course: (preferred)	Credit	08.0707	Marketing, Introduction (7-9 grade)	.50	52.0511	Business Communications I	.50	52.0521	Business Communications II	.50	52.0311	Business Math	.50	52.0417	Computer Technology	.50	52.0461	Word Processing Basic/Keyboarding	.50	Foundation Courses: (required)			08.0708	Marketing	.50	08.0705	Retailing or Student Store	.50	Elective Courses:			08.9904	Advertising/Promotion	.50	08.0710	Customer Service	.50	08.0802	e-Commerce	.50	08.0101	Fashion Merchandising	.50	08.0705	Retail Management	.50	08.0903	Sports & Entertainment Marketing	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	1.00 credits
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High School to College and Career Pathway: Secondary

Area of Study: Marketing Education

Pathway: Travel & Tourism

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																																												
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Workforce Trends According to the U.S. Department of Labor, travel and tourism is one of the largest and fastest-growing industries in the world. Each year, travel and tourism employers around the world pay more than \$1.6 trillion in wages and salaries and create 12.5 million new jobs.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			<table><tr><th colspan="3">Career and Technical Education Recommended Pathway Courses</th></tr><tr><td colspan="3">(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</td></tr><tr><th colspan="3">CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</th></tr><tr><th>Course #</th><th>Introductory Course: (preferred)</th><th>Credit</th></tr><tr><td>08.0707</td><td>Marketing, Introduction (7-9 grade)</td><td>.50</td></tr><tr><td>52.0511</td><td>Business Communications I</td><td>.50</td></tr><tr><td>52.0521</td><td>Business Communications II</td><td>.50</td></tr><tr><td>52.0311</td><td>Business Math</td><td>.50</td></tr><tr><td>52.0417</td><td>Computer Technology</td><td>.50</td></tr><tr><td>52.0461</td><td>Word Processing Basic/Keyboarding</td><td>.50</td></tr><tr><th colspan="3">Foundation Courses: (required)</th></tr><tr><td>08.0901</td><td>Travel & Tourism</td><td>.50</td></tr><tr><td>08.0708</td><td>Marketing</td><td>.50</td></tr><tr><th colspan="3">Elective Courses:</th></tr><tr><td>08.9904</td><td>Advertising/Promotion</td><td>.50</td></tr><tr><td>08.0710</td><td>Customer Service</td><td>.50</td></tr><tr><td>08.0802</td><td>e-Commerce</td><td>.50</td></tr><tr><td>08.7999</td><td>International Marketing</td><td>.50</td></tr><tr><td>08.0903</td><td>Sports & Entertainment Marketing</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table> <p>1.00 credits</p> <p>2.00 credits</p> <p>3.00 credits for completion</p>					Career and Technical Education Recommended Pathway Courses			(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)			CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL			Course #	Introductory Course: (preferred)	Credit	08.0707	Marketing, Introduction (7-9 grade)	.50	52.0511	Business Communications I	.50	52.0521	Business Communications II	.50	52.0311	Business Math	.50	52.0417	Computer Technology	.50	52.0461	Word Processing Basic/Keyboarding	.50	Foundation Courses: (required)			08.0901	Travel & Tourism	.50	08.0708	Marketing	.50	Elective Courses:			08.9904	Advertising/Promotion	.50	08.0710	Customer Service	.50	08.0802	e-Commerce	.50	08.7999	International Marketing	.50	08.0903	Sports & Entertainment Marketing	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
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Get the Facts Approximately 42 million international visitors traveled to the United States in 2004. As a result, the U.S. travel industry received roughly \$568 billion from travelers.		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																																																			

Sample Occupations

- > Concierge
- > Cruise Director
- > Event Planner
- > Host/Hostess
- > Hotel Manager
- > Lodging Manager
- > Tour Guides
- > Travel Agent
- > Travel Clerk
- > Waiter/Waitress

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

000803

Build a Skill for Life

SKILLED & TECHNICAL SCIENCES EDUCATION

Skilled and Technical Sciences Education – (20 Pathways)

Building Trades

- Carpentry
- Electrician
- HVAC
- Plumbing

Communication

- Television Broadcasting Technician

Mechanics & Repairs

- Automotive Collision Repair
- Automotive Service Technician
- Electronics
- Heavy Duty Diesel

Precision Production Trades

- Cabinetmaking/Millwork
- Drafting/CAD
- Graphics/Printing
- Machine Tool
- Welding

Personal Services

- Cosmetology/Barbering

Protective Services

- Firefighting
- Law Enforcement

Transportation & Material Moving

- Commercial Aviation

Visual Arts

- Commercial Art
- Commercial Photography



Our Mission: Skilled and Technical Sciences (STS) Education prepares students for employment and/or continuing education opportunities in skilled trades and other technical occupations, as well as promoting quality programs based on recognized industry standards.

General Tips:

- The Utah Skilled and Technical Sciences Education pathways are based on the national skills standards, where applicable, and established state standards.
- Specific course offerings vary by school. Many skilled and technical science courses are also available at local colleges and ATCs. Students should see their school counselors to take advantage of these courses. Many courses offer concurrent enrollment opportunities for students and may provide a seamless transition for students in the STS programs at the college level.

Tips for Teachers and Counselors:

- By taking STS courses, students can obtain certification and be ready to work in careers such as automotive service technician, automotive collision repair, carpentry, plumbing, cabinetmaking, cosmetology, drafting, printing, machining, TV broadcasting, and welding. In addition, through the STS courses students can gain an important foundation of knowledge and skills necessary for continued education in other areas of study.
- Many of the pathways begin with an introduction course, which provides all students with an awareness of the career possibilities in that pathway along with instruction in basic principles of that career.
- To complete a pathway, students must complete the foundation courses listed as well as enough credits in the introductory and/or elective courses, which generally equals 3.00 total credits.
- Teachers can provide pathway information to students, parents, and counselors so that each student can maximize his or her educational opportunities in the STS.
- It is important for counselors to note that students interested in careers in this area of study should also take academic courses that emphasize science and math skills. Through the SEOP process, students may take advantage of courses in the STS that will count as science and math credits toward graduation.

Leadership Opportunities:

SkillsUSA is the Career and Technical Student Organization for these pathways and is an integral part of a student's experience. SkillsUSA provides students with opportunities to develop leadership and communication skills, self-confidence, and an understanding of current industry issues and needs.

Transition to Post-Secondary and/or Career:

- A variety of Work-Based Learning (WBL) experiences should be implemented throughout the pathway. WBL experiences allow students to see, firsthand, how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that every student receives the academic knowledge and technical skills needed to be successful in the STS career of his or her choice. Students will develop essential career preparation skills through technical and experiential education, as well as personal leadership opportunities.



High School to College and Career Pathway: Secondary
Area of Study: Skilled & Technical Sciences Education

**Pathway: Building Trades
Carpentry**

Middle School			State Requirements		High School Suggested Education Plan				College & Careers																																				
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Workforce Trends Carpentry is a very large occupation in the United States. With the proper training and skills, job opportunities will be abundant. Get the Facts Each year, the U.S. adds about \$600 billion worth of new construction projects. In Utah, a carpenter must be licensed.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		<table><thead><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>46.9999</td><td>Construction Trades Foundation</td><td>1.00</td></tr><tr><td>46.0201</td><td>Carpentry</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>15.1301</td><td>Drafting & Design Technology</td><td>.50</td></tr><tr><td>46.0101</td><td>Masonry/Tile</td><td>1.00</td></tr><tr><td>46.0499</td><td>Concrete Placing & Finishing</td><td>1.00</td></tr><tr><td>48.0701</td><td>Woodworking</td><td>.50</td></tr><tr><td>48.0702</td><td>Furniture Design & Manufacturing</td><td>1.00</td></tr><tr><td>48.0703</td><td>Cabinetmaking</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>						Course #	Foundation Course: (required)	Credit	46.9999	Construction Trades Foundation	1.00	46.0201	Carpentry	1.00	Elective Courses:			15.1301	Drafting & Design Technology	.50	46.0101	Masonry/Tile	1.00	46.0499	Concrete Placing & Finishing	1.00	48.0701	Woodworking	.50	48.0702	Furniture Design & Manufacturing	1.00	48.0703	Cabinetmaking	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	2.00 credits 1.00 credits 3.00 credits for completion		
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48.0703	Cabinetmaking	1.00																																											
32.0199	Student Internship (Critical Workplace Skills)	.50																																											

Sample Occupations

- > Carpenter
- > Carpenter Helper
- > Construction Laborer
- > Construction Manager
- > Finish Carpenter
- > Foreman

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

009904



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Building Trades Electrician

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																									
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																									
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>																									
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																											
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Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																										
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life: .50 / Health Education .50 Lifetime Activities or Sport .50																												
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																													
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			Computer Tech.	.50	Computer Technology .50																													
CTE Intro 1.00		1.00	Career and Technical Education	1.00																														
<p>Workforce Trends</p> <p>As the population and economy grow, more electricians will be needed to install and maintain electrical devices and wiring in homes, offices, and other structures. Job opportunities are expected to be excellent, largely arising from the need to replace electricians who leave the occupation permanently.</p> <p>Get the Facts</p> <p>Compact florescent light bulbs use 75% less energy and last 10 times as long as regular incandescent.</p> <p>In Utah, an electrician must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><thead><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>46.9999</td><td>Construction Trades Foundation</td><td>1.00</td></tr><tr><td>46.0302</td><td>Electrician</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>15.1301</td><td>Drafting & Design Technology</td><td>.50</td></tr><tr><td>47.0105</td><td>Electronics I</td><td>.50</td></tr><tr><td>48.0701</td><td>Woodworking</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>				Course #	Foundation Course: (required)	Credit	46.9999	Construction Trades Foundation	1.00	46.0302	Electrician	1.00	Elective Courses:			15.1301	Drafting & Design Technology	.50	47.0105	Electronics I	.50	48.0701	Woodworking	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>2.00 credits</p> <p>1.00 credits</p> <p>3.00 credits for completion</p>	
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<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																																		

009910

High School to College and Career Pathway: Secondary
Area of Study: Skilled & Technical Sciences Education



**Pathway: Building Trades
HVAC**

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																													
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																													
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																													
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P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																																
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CTE Intro 1.00		1.00	Career and Technical Education	1.00																																		
<p>Workforce Trends Advances in computer technology have revolutionized the way we monitor and control the engineering systems in buildings. Job openings continue to multiply and the job outlook is very good through the year 2014.</p> <p>Get the Facts The average homeowner spends close to \$1,300 a year on utility bills. But an energy-efficient home can lower utility bills by 10 to 50%. In Utah, an HVAC mechanic/installer must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.</p>			<p>Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><thead><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>46.9999</td><td>Construction Trades Foundation</td><td>1.00</td></tr><tr><td>47.0201</td><td>Heating/Air Conditioning/Refrigeration (HVAC)</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>15.1301</td><td>Drafting & Design Technology</td><td>.50</td></tr><tr><td>46.0302</td><td>Electrician</td><td>1.00</td></tr><tr><td>46.0501</td><td>Plumbing</td><td>1.00</td></tr><tr><td>47.0105</td><td>Electronics I</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>				Course #	Foundation Course: (required)	Credit	46.9999	Construction Trades Foundation	1.00	47.0201	Heating/Air Conditioning/Refrigeration (HVAC)	1.00	Elective Courses:			15.1301	Drafting & Design Technology	.50	46.0302	Electrician	1.00	46.0501	Plumbing	1.00	47.0105	Electronics I	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	<p>2.00 credits</p> <p>1.00 credits</p> <p>3.00 credits for completion</p>		<p>Sample Occupations</p> <ul style="list-style-type: none">> HVAC Mechanic and Installer> Stationary Engineer <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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009915



Area of Study: Skilled & Technical Sciences Education

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																					
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																					
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CTE Intro 1.00		1.00		1.00																										
Workforce Trends Demand for plumbers will stem from new construction and renovation, repair and maintenance of existing buildings.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				2.00 credits 1.00 credits 3.00 credits for completion																					
Get the Facts Wooden pipes were common until the early 1800s, when a change was made to iron. In Utah, a plumber must be licensed.					<table border="1"> <thead> <tr> <th>Course #</th> <th>Foundation Course: (required)</th> <th>Credit</th> </tr> </thead> <tbody> <tr> <td>46.9999</td> <td>Construction Trades Foundation</td> <td>1.00</td> </tr> <tr> <td>46.0501</td> <td>Plumbing</td> <td>1.00</td> </tr> <tr> <td></td> <td>Elective Course:</td> <td></td> </tr> <tr> <td>15.1301</td> <td>Drafting & Design Technology</td> <td>.50</td> </tr> <tr> <td>46.0201</td> <td>Carpentry</td> <td>1.00</td> </tr> <tr> <td>32.0199</td> <td>Student Internship (Critical Workplace Skills)</td> <td>.50</td> </tr> </tbody> </table>					Course #	Foundation Course: (required)	Credit	46.9999	Construction Trades Foundation	1.00	46.0501	Plumbing	1.00		Elective Course:		15.1301	Drafting & Design Technology	.50	46.0201	Carpentry	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
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High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Communication

Television Broadcasting Technician

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																									
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<p>Workforce Trends Employment growth will result from increased hours of programming, but will be offset by labor-saving technology.</p> <p>Get the Facts Annual gross television-broadcasting revenues in the U.S. are conservatively estimated at about \$25 billion.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>																																
<p>3.00 credits for completion</p>																																		
<p>Sample Occupations</p> <ul style="list-style-type: none">> Audio and Video> Equipment Tech. <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																																		

009919



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Mechanics & Repairs Automotive Collision Repair

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50					
			Financial Literacy	.50			Financial Literacy .50			
			Computer Tech.	.50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				<p>> Automotive Body Repairer</p> <p>> Automotive Collision Repairer</p> <p>> Automotive Specialty Technician</p>	
<p>Workforce Trends</p> <p>Job opportunities in the automotive industry are very good for persons with formal training in automotive body repair and mechanics.</p> <p>Get the Facts</p> <p>97% of all cars taken out of service are recycled, making them the most recycled product in the world.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Course #	Foundation Course: (required)	Credit	2.00 credits			
				47.0603	Automotive Collision Repair *	1.00				
						Elective Courses:				1.00 credits
						47.0604	Automotive Service Technician	1.00		
						47.0606	Small Vehicle Technician	1.00		
32.0199	Student Internship (Critical Workplace Skills)	.50								
				* Will include advanced Automotive Collision Repair courses			3.00 credits for completion			
					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov	

009901



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Mechanics & Repairs Automotive Service Technician

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50			Financial Literacy .50		
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				
Workforce Trends Job opportunities in the automotive industry are expected to be very good for persons with formal training, strong diagnostic and problem-solving skills, and knowledge of electronics and mathematics. Employment of automotive service technicians and mechanics is expected to increase 9 to 17% through the year 2014.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Course #	Foundation Course: (required)	Credit	2.00 credits	
					47.0604	Automotive Service Technician *	1.00		
					Elective Courses:			1.00 credits	
					47.0105	Electronics I	1.00		
					47.0603	Automotive Collision Repair	1.00		
					47.0606	Small Vehicle Technician	1.00		
					32.0199	Student Internship (Critical Workplace Skills)	.50		
* Will include advanced Automotive Service Technician courses					3.00 credits for completion				
Get the Facts According to the U.S. Department of Labor, the automotive industry is rapidly growing and "the work of automotive service technicians and mechanics has evolved from simply mechanical to high technology."					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				
									For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

009902



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Mechanics & Repairs Electronics

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																		
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																		
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																		
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																				
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)																				
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																			
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																					
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																						
			Financial Literacy	.50			Financial Literacy .50																				
			Computer Tech.	.50	Computer Technology .50																						
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL																						
<p>Workforce Trends Employment will be limited by computer-aided design and other technologies that increase productivity. Opportunities will be best for those who have an associate's degree or extensive job training.</p> <p>Get the Facts A typical American household owns 25 electronic products.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		<table><thead><tr><th>Course #</th><th>Foundation Courses: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>47.0105</td><td>Electronics I</td><td>.50</td></tr><tr><td>47.0105</td><td>Digital Electronics</td><td>1.00</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>15.1301</td><td>Drafting & Design Technology</td><td>.50</td></tr><tr><td>46.0302</td><td>Electrician</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>	Course #	Foundation Courses: (required)	Credit	47.0105	Electronics I	.50	47.0105	Digital Electronics	1.00	Elective Courses:			15.1301	Drafting & Design Technology	.50	46.0302	Electrician	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	<div>1.50 credits</div> <div>.50 credits</div> <div>2.00 credits for completion</div>	
				Course #	Foundation Courses: (required)	Credit																					
				47.0105	Electronics I	.50																					
				47.0105	Digital Electronics	1.00																					
				Elective Courses:																							
				15.1301	Drafting & Design Technology	.50																					
				46.0302	Electrician	.50																					
				32.0199	Student Internship (Critical Workplace Skills)	.50																					
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment.																											
Check regional post-secondary Pathways for details.																											
								<p>Sample Occupations</p> <ul style="list-style-type: none">> Electronics Equipment Assembler> Electronics Drafter> Electronics Engineer> Electronics Installer Repairer <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																			

009911



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Mechanics & Repairs Heavy Duty Diesel

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																				
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																					
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																				
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																						
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)																						
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																					
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50																							
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																								
			Financial Literacy	.50	Financial Literacy .50																								
			Computer Tech.	.50	Computer Technology .50																								
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL																								
<p>Workforce Trends Employment growth will result from the increased manufacturing of buses and trucks powered by durable, economical diesel engines. Opportunities are good for those with formal diesel mechanic training and experience with electronic and diagnostic equipment.</p> <p>Get the Facts In 2006, the Environmental Protection Agency (EPA) imposed stricter emissions standards for diesel trucks starting in 2007. This regulation is designed to reduce diesel truck emissions by 90%.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		<table><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr><tr><td>47.0605</td><td>Heavy Duty Mechanics/Diesel *</td><td>1.00</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>47.0105</td><td>Electronics I</td><td>1.00</td></tr><tr><td>47.0604</td><td>Automotive Service Technician</td><td>1.00</td></tr><tr><td>47.0606</td><td>Small Vehicle Technician</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>			Course #	Foundation Course: (required)	Credit	47.0605	Heavy Duty Mechanics/Diesel *	1.00	Elective Courses:			47.0105	Electronics I	1.00	47.0604	Automotive Service Technician	1.00	47.0606	Small Vehicle Technician	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	2.00 credits	
				Course #	Foundation Course: (required)	Credit																							
				47.0605	Heavy Duty Mechanics/Diesel *	1.00																							
				Elective Courses:																									
				47.0105	Electronics I	1.00																							
				47.0604	Automotive Service Technician	1.00																							
				47.0606	Small Vehicle Technician	1.00																							
32.0199	Student Internship (Critical Workplace Skills)	.50																											
* Will include advanced Diesel courses			1.00 credits																										
3.00 credits for completion																													
<p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>																													

<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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009914



Area of Study: Skilled & Technical Sciences Education

Middle School		State Requirements		High School Suggested Education Plan						College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School		
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals.		
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		> Certificate		
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)		> Associate degree		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	> Bachelor degree		
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education. 50 Lifetime Activities or Sport .50			> Professional degree		
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50					> On-the-job training	
			Financial Literacy .50	Financial Literacy .50					> Apprenticeship	
			Computer Tech. .50	Computer Technology .50					> Military training	
CTE Intro 1.00		1.00	Career and Technical Education 1.00	Career and Technical Education Recommended Pathway Courses						
Workforce Trends Job prospects will be best for highly skilled workers and those with knowledge of computerized machine tool operation. Get the Facts Construction is the second largest employer in the country, with nearly 7 million people working in construction today.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)						
				CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL						
				Course #	Foundation Courses: (required)	Credit	} 2.50 credits			
				48.0701	Woodworking	.50				
				48.0702	Furniture Design & Manufacturing	1.00				
				48.0703	Cabinetmaking	1.00	} .50 credits			
				Elective Courses:						
				15.1301	Drafting & Design Technology	.50				
				52.0312	Accounting I	.50				
				32.0199	Student Internship (Critical Workplace Skills)	.50				
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.						3.00 credits for completion				

Beyond High School

- > Certificate
- > Associate degree
- > Bachelor degree
- > Professional degree
- > On-the-job training
- > Apprenticeship
- > Military training

Sample Occupations

- > Cabinetmaker
- > Carpenter
- > Carpenter Helper
- > Finish Carpenter
- > Foreman
- > Line Supervisor

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Precision Production Trades Drafting/CAD

Middle School		State Requirements			High School Suggested Education Plan				College & Careers		
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School			
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>		
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)				
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)				
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50			
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life: .50 / Health Education .50 Lifetime Activities or Sport .50					
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50						
			Financial Literacy	.50			Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50						
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL						
<p>Workforce Trends</p> <p>Industrial growth and increasingly complex designs will spur growth in drafting services. As technology advances, opportunities will be best for drafters with at least 2 years of post-secondary training, and computer-aided design systems experience.</p> <p>Get the Facts</p> <p>In today's technologically advanced business world, drafters must have excellent drawing and graphic skills along with a high level of computer skills.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p> <p>In Utah, an architect and a landscape architect must be licensed.</p>		Course #			Foundation Courses: (required)		Credit	<p>2.00 credits</p> <p>1.00 credits</p> <p>3.00 credits for completion</p>	
				15.1301			Drafting & Design Technology		.50		
				15.1302			Drafting/CAD		.50		
				15.1303			Architectural Drafting		1.00		
				15.1306			Mechanical Drafting		1.00		
							Elective Courses:				
				46.0201			Carpentry		1.00		
				48.0503			Machine Tool		1.00		
				48.0701			Woodworking		.50		
				32.0199			Student Internship (Critical Workplace Skills)		.50		
					<p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>						

009909



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Precision Production Trades Graphics/Printing

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	There are a number of options for education and training beyond high school, depending on your career goals. > Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Chemistry 1.00 or Physics 1.00 or Physics with Tech. 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				Sample Occupations > Graphic Designer > Printing Machine Operator	
			Financial Literacy	.50	Financial Literacy .50					
			Computer Tech.	.50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov	
Workforce Trends Employment growth in this highly competitive occupation will stem from increased demand for newer, high-technology industrial products in medicine, transportation, and other industries, and for Internet and video images. Get the Facts There are over 4 trillion paper documents in the U.S. alone – growing at a rate of 22% per year.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #		Foundation Courses: (required)		Credit		2.00 credits
				10.0301		Graphic Communications, Introduction		.50		
				10.0302		Graphic Communications, Intermediate		.50		
				10.0303		Graphic Communications, Advanced		1.00		
						Elective Courses:				1.00 credits
				10.0304		Digital Preparation		1.00		
				10.0305		Screen Printing, Introduction		.50		
				32.0199		Student Internship (Critical Workplace Skills)		.50		
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					3.00 credits for completion					

009913



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Precision Production Trades Machine Tool

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School		
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life: .50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50					
			Financial Literacy	.50	Financial Literacy .50					
			Computer Tech.	.50	Computer Technology .50					
CTE intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
Workforce Trends Despite rising productivity that is expected to limit employment growth, opportunities should be excellent because not enough qualified people are attracted to production-related occupations. Get the Facts No two countries were more responsible for the Industrial Revolution than America and England. In England, machines served to make talented artisans better. In America, machines served to make entrepreneurs more productive.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Course #		Foundation Course: (required)		Credit		3.00 credits
				48.0503		Machine Tool *		1.00		
						Elective Courses:			1.00 credits	
				48.0508		Welding		1.00		
				48.0701		Woodworking		.50		
				32.0199		Student Internship (Critical Workplace Skills)		.50		
				* Will include advanced Machine Tool courses				4.00 credits for completion		
				Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.						

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Precision Production Trades Welding

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50					
			Financial Literacy	.50			Financial Literacy .50			
			Computer Tech.	.50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
<p>Workforce Trends Job prospects should be excellent for skilled candidates.</p> <p>Get the Facts During the Middle Ages, the art of blacksmithing was developed and many items of iron were produced which were welded by hammering. It was not until the 19th century that welding as we know it today was invented.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Course #		Foundation Course: (required)		Credit		<p>2.00 credits</p> <p>1.00 credits</p> <p>3.00 credits for completion</p>
				48.0508		Welding *		1.00		
						Elective Courses:				
				15.1301		Drafting & Design Technology		.50		
				48.0503		Machine Tool		1.00		
				48.0508		Welding Fabrications		1.00		
				32.0199		Student Internship (Critical Workplace Skills)		.50		
				* Will include advanced Welding courses						
				<p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>						

009920



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Personal Services Cosmetology/Barbering

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																							
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																								
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>																							
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																									
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00 or Chemistry 1.00	(1 additional credit -- class of 2011)																									
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																								
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																										
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																											
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			Computer Tech.	.50	Computer Technology .50																											
CTE Intro 1.00		1.00	Career and Technical Education	1.00	<p>Career and Technical Education Recommended Pathway Courses</p> <p>(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)</p> <p>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</p> <table><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr><tr><td>12.0403</td><td>Cosmetology *</td><td>1.00</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>52.0211</td><td>Business Management</td><td>.50</td></tr><tr><td>52.0311</td><td>Business Math</td><td>.50</td></tr><tr><td>52.0312</td><td>Accounting I</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table> <p>* Will include advanced Cosmetology/Barbering courses</p> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>				Course #	Foundation Course: (required)	Credit	12.0403	Cosmetology *	1.00	Elective Courses:			52.0211	Business Management	.50	52.0311	Business Math	.50	52.0312	Accounting I	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	3.00 credits	1.00 credits	4.00 credits for completion
Course #	Foundation Course: (required)	Credit																														
12.0403	Cosmetology *	1.00																														
Elective Courses:																																
52.0211	Business Management	.50																														
52.0311	Business Math	.50																														
52.0312	Accounting I	.50																														
32.0199	Student Internship (Critical Workplace Skills)	.50																														
<p>Workforce Trends</p> <p>Population growth and expanding services are expected to create good job prospects among hairstylists and among manicurists and pedicurists.</p> <p>Get the Facts</p> <p>Human hair is being used to clean up oil spills. Hair has a natural ability to absorb oils. Researchers have begun to use scrap hair from barbershops and beauty salons to keep our water clean.</p> <p>In Utah, a cosmetologist, barber, electrologist, and/or nail technician must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>																														
								<p>Sample Occupations</p> <p>> Barber</p> <p>> Cosmetologist</p> <p>> Manicurist</p> <p>> Pedicurist</p>																								
								<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																								

009908



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Protective Services Firefighting

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																				
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																				
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training</p> <p>Sample Occupations</p> <p>> Battalion Chief > Fire Chief's Aide > Firefighter Supervisor > Fire Inspector > Fire Marshall > Forest Firefighter</p> <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>																				
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																						
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00 or Chemistry 1.00	(1 additional credit -- class of 2011)																						
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																					
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																							
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50																								
			Financial Literacy	.50	Financial Literacy .50																								
			Computer Tech.	.50	Computer Technology .50																								
CTE Intro 1.00		1.00	Career and Technical Education	1.00																									
Workforce Trends Employment of firefighters is expected to grow 18 to 26% for all occupations through 2014. Those who have completed some firefighter education at a community college and have EMT certification will have an additional advantage.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL																								
Get the Facts This is a nontraditional occupation for women; 3.3% of all firefighters are women. In Utah, 85.1% of firefighters are volunteers and 14.9% are career firefighters.					<table><thead><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>43.0203</td><td>Fire Science</td><td>.50</td></tr><tr><td>51.0911</td><td>EMS, Introduction</td><td>.50</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>15.0507</td><td>Environmental Science</td><td>.50</td></tr><tr><td>21.0105</td><td>Principles of Technology</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>				Course #	Foundation Course: (required)	Credit	43.0203	Fire Science	.50	51.0911	EMS, Introduction	.50	Elective Courses:			15.0507	Environmental Science	.50	21.0105	Principles of Technology	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
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43.0203	Fire Science	.50																											
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21.0105	Principles of Technology	.50																											
32.0199	Student Internship (Critical Workplace Skills)	.50																											
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					1.00 credits																								
					1.00 credits																								
					2.00 credits for completion																								

009912



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Protective Services Law Enforcement

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																				
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																					
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training																					
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																							
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)																							
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P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50																								
The Arts .50	The Arts .50	1.0	Fine Arts 1.50	Fine Arts Courses 1.50																									
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CTE Intro 1.00		1.00	Career and Technical Education 1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL <table><thead><tr><th>Course #</th><th>Foundation Course: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>51.0911</td><td>EMS, Introduction</td><td>.50</td></tr><tr><td>43.0107</td><td>Law Enforcement</td><td>.50</td></tr><tr><td colspan="3">Elective Courses:</td></tr><tr><td>15.0507</td><td>Environmental Science</td><td>.50</td></tr><tr><td>21.0105</td><td>Principles of Technology</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>					Course #	Foundation Course: (required)	Credit	51.0911	EMS, Introduction	.50	43.0107	Law Enforcement	.50	Elective Courses:			15.0507	Environmental Science	.50	21.0105	Principles of Technology	.50	32.0199	Student Internship (Critical Workplace Skills)	.50
Course #	Foundation Course: (required)	Credit																											
51.0911	EMS, Introduction	.50																											
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Elective Courses:																													
15.0507	Environmental Science	.50																											
21.0105	Principles of Technology	.50																											
32.0199	Student Internship (Critical Workplace Skills)	.50																											
Workforce Trends Employment of police and detectives is expected to increase 9 to 17% through the year 2014. A more security-conscious society and concern about drug-related crimes will contribute to the increasing demand for police services.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				2.00 credits for completion																					
Get the Facts There are approximately 740,000 sworn law enforcement officers now serving in the United States. About 10% of them are female.																													
								Sample Occupations <ul style="list-style-type: none">> Correctional Officer> Deputy Sheriff> Police Detective & Criminal Investigator> Police Patrol Officer> Police Supervisor> Sheriff																					
								For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov																					

009916



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Transportation & Material Moving Commercial Aviation

Middle School		State Requirements			High School Suggested Education Plan				College & Careers	
7 th Grade	8 th Grade	Middle School	High School		9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>	
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)			
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biological Science 1.00	(1 additional credit -- class of 2011)			
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50		
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50				
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50					
			Financial Literacy	.50			Financial Literacy .50			
			Computer Tech.	.50	Computer Technology .50					
CTE Intro 1.00		1.00	Career and Technical Education	1.00	Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
<p>Workforce Trends</p> <p>Rising population and income will drive demand for airline travel and the need for commercial aviation workers. Those who have attended college for at least 2 years and have experience dealing with the public should have the best prospects.</p> <p>Get the Facts</p> <p>A Boeing 747 airliner holds 57,285 gallons of fuel!</p> <p>In Utah, an aircraft mechanic and a pilot must be licensed.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Course #	Foundation Courses: (required)	Credit	3.00 credits			
				48.0190	Aviation Ground Support Services	1.00				
				49.0102	Commercial Aircraft Pilot	1.00				
										.50 credits
				49.0106	Flight Attendant	1.00				
					Elective Course:					
32.0199	Student Internship (Critical Workplace Skills)	.50								
					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.					
					3.50 credits for completion					

<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
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009906



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Visual Arts Commercial Art

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																											
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																												
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate</p> <p>> Associate degree</p> <p>> Bachelor degree</p> <p>> Professional degree</p> <p>> On-the-job training</p> <p>> Apprenticeship</p> <p>> Military training</p>																												
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math 2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)																														
Science .50	Science 1.00	1.50	Science 2.00	Earth Systems 1.00	Chemistry 1.00	(1 additional credit -- class of 2011)																														
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50																													
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life, 50 / Health Education .50 Lifetime Activities or Sport .50																															
The Arts .50	The Arts .50	1.00	Fine Arts 1.5	Fine Arts Courses 1.50		Yearbook .50 / AP Studio Art Design 1.00																														
			Financial Literacy .50			Financial Literacy .50																														
			Computer Tech. .50	Computer Technology .50																																
CTE Intro 1.00		1.00	Career and Technical Education 1.00																																	
Workforce Trends The expanding electronic media and entertainment industries will offer opportunities for animators, illustrators, and graphic artists. Competition for jobs will be keen.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor. Concurrent enrollment course offerings vary by school and district.		Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				Sample Occupations <p>> Advertising Designer</p> <p>> Animator/Illustrator</p> <p>> Commercial Designer</p> <p>> Fashion Artist</p> <p>> Graphic Designer</p> <p>> Painter/Illustrator</p> <p>> Photographer</p> <p>> Sketch Artist</p>																												
Get the Facts Vincent Van Gogh painted four still-life canvases devoted entirely to the potato.				<table><tr><th>Course #</th><th>Foundation Courses: (required)</th><th>Credit</th></tr><tr><td>50.0401</td><td>Commercial Art I</td><td>.50</td></tr><tr><td>50.0402</td><td>Commercial Art II</td><td>1.00</td></tr><tr><td>50.0404</td><td>Commercial Art III</td><td>1.00</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>11.0210</td><td>Multimedia I</td><td>1.00</td></tr><tr><td>50.0406</td><td>Commercial Photography</td><td>.50</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></table>					Course #	Foundation Courses: (required)	Credit	50.0401	Commercial Art I	.50	50.0402	Commercial Art II	1.00	50.0404	Commercial Art III	1.00	Elective Courses:			11.0210	Multimedia I	1.00	50.0406	Commercial Photography	.50	32.0199	Student Internship (Critical Workplace Skills)	.50	2.50 credits			
Course #	Foundation Courses: (required)	Credit																																		
50.0401	Commercial Art I	.50																																		
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32.0199	Student Internship (Critical Workplace Skills)	.50																																		
				1.00 credits																																
				3.50 credits for completion																																
				Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.																																

For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov

009905



High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education

Pathway: Visual Arts

Commercial Photography

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School	
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	(1 additional credit -- class of 2011)	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training</p>
Pre-Algebra 1.00	Elm. Algebra or Applied Math 1.00	2.00	Math	2.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	(1 additional credit -- class of 2011)		
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Chemistry 1.00 or Physics 1.00 or Physics with Tech. 1.00	(1 additional credit -- class of 2011)		
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50		Art Foundations 1.00	Fine Arts Courses 1.50		
			Financial Literacy	.50			Financial Literacy .50		
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00		1.00	Career and Technical Education	1.00					
<p>Workforce Trends</p> <p>The number of portrait photographers is projected to increase along with the population. New opportunities should arise with Internet-based media companies, but keen competition is expected.</p> <p>Get the Facts</p> <p>The word "photography" comes from the Greek words for light and writing.</p>		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>		Career and Technical Education Recommended Pathway Courses				<p>2.50 credits</p> <p>1.00 credits</p> <p>3.50 credits for completion</p>	
				(Students may select individual courses for exploration, or complete pathway for an in-depth focus.)					
				CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL					
				Course #	Foundation Courses: (required)	Credit			
				50.0406	Commercial Photography	1.00	}		
				50.0406	Digital Photography	1.00			
				50.0406	Photography Concepts, Advanced	.50			
					Elective Courses:		}		
				11.0210	Multimedia	1.00			
				50.0401	Commercial Art	1.00			
32.0199	Student Internship (Critical Workplace Skills)	.50							
Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment.									
Check regional post-secondary Pathways for details.									
<p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>									

Technology & Engineering Education – (2 Pathways)

- *Pre-Engineering*
(Utah Pre-Engineering Program)
- *Project Lead the Way*
(National Pre-Engineering Program)

Our Mission: Technology and Engineering Education is committed to preparing students for employment and/or continuing education opportunities by teaching them to understand, design, produce, use, and manage the human-made world in order to contribute and function in a technological society.

General Tips:

- The two Utah Technology and Engineering pathways are designed to give students a foundational understanding of the worlds of engineering and engineering technology.
 - Project Lead the Way (PLTW) pre-engineering pathway is a nationally developed curriculum that puts students through four or five rigorous courses. The courses are designed to give students relevant engineering experiences where they use language arts, math, and science concepts in real-world applications and settings.
 - Foundation course offerings are Introduction to Engineering Design, Principles of Engineering, and Digital Electronics.
 - Specialty course options from which a student chooses are Computer Integrated Manufacturing, Civil Engineering, Aerospace Engineering, and Engineering Design and Development.
 - Students also take a year of math, science and language arts each year they are in the pathway.
 - The Utah Pre-engineering pathway is a set of four rigorous courses that introduce students to the world of engineering and engineering technology.
 - Foundations of Technology, Engineering Design, and Materials and Processes are semester-based courses designed to give students foundational pre-engineering experiences.

- The Pre-engineering course is the capstone course of the Utah pathway, where students receive real teamwork experience researching, designing and producing a functioning prototype to solve an engineering problem.
 - This pathway is flexible and needs to involve the district and the high school in its design and the layout of its expectations.
 - Students also take a year of math, science and language arts each year they are in the pathway.

Tips for Teachers and Counselors:

- Teachers can provide pathway information to students, parents, and counselors so that students can maximize their educational opportunities in the Engineering and Engineering Technology fields.
- Through the SEOP process, students may take advantage of courses in the technology and engineering area that will count as science credits toward graduation.

Leadership Opportunities:

- The Career and Technical Student Organization for these pathways is TSA – Technology Student Association. TSA provides students with opportunities to develop leadership and communication skills, self-confidence, and an understanding of current career issues.

Transition to Post-Secondary and/or Career:

- These pathways should implement a variety of Work-Based Learning (WBL) experiences. WBL experiences allow students to see how classroom instruction connects to the world of work and future career opportunities.

Our vision is to see that every student receives the academic knowledge and technical skills needed to be successful in the technology and engineering career of his or her choice, by combining engineering principles, mathematics, and science courses that result in a logical thought process. Technology and Engineering Education students will develop essential career preparation skills through technical and academic courses, as well as personal leadership opportunities.



High School to College and Career Pathway: Secondary

Area of Study: Technology and Engineering Education

Pathway: Pre-Engineering (Utah Pre-Engineering Program)

Middle School		State Requirements			High School Suggested Education Plan				College & Careers
7 th Grade	8 th Grade	Middle School		High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.0	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	Language Arts 12 1.00	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none">> Certificate> Associate degree> Bachelor degree> Professional degree> On-the-job training> Apprenticeship> Military training
Math 7 1.00	Pre-Algebra 1.00	2.00	Math	2.00	Elm Algebra or Applied Math 1.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	Pre-Calculus 1.00	
Science .50	Science 1.00	1.50	Science	2.00	Earth Systems 1.00	Biology 1.00	Physics 1.00 or Physics with Technology 1.00	Chemistry 1.00	
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies	2.50	World Civilizations .50	Geography for Life .50	U.S. History II 1.00	U.S. Government and Citizenship .50	
P.E. 1.00	Health .50	1.50	P.E./Health	2.00	Participation Skills and Techniques .50	Fitness for Life. 50 / Health Education .50 Lifetime Activities or Sport .50			
The Arts .50	The Arts .50	1.00	Fine Arts	1.50	Fine Arts Courses 1.50				
			Financial Literacy	.50	Financial Literacy .50				
			Computer Tech.	.50	Computer Technology .50				
CTE Intro 1.00	Exploring Technology .50	1.00	Career and Technical Education	1.00					
Workforce Trends Due to the expansion of jobs in the technical fields and the increasing numbers of engineers who are retiring, the number of job openings in technology and engineering is increasing. There is a critical shortage of engineers and engineering technologists entering the field at a time when technology is reinventing itself every few years.		<p>Core Curriculum and elective requirements may vary district to district. Check with your school counselor.</p> <p>Concurrent enrollment course offerings vary by school and district.</p>			Career and Technical Education Recommended Pathway Courses (Students may select individual courses for exploration, or complete pathway for an in-depth focus.) CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL				Sample Occupations <ul style="list-style-type: none">> Civil Engineer> Civil Engineering Technician> Electrical Engineer> Mechanical Engineer> Mechanical Engineering Technician <p>For more information on salary projections, labor market demand, and training options, visit www.careers.utah.gov</p>
Get the Facts In Utah, an engineer, professional or structural, must be licensed.									
					Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.				
					3.00 credits for completion				

002102



High School to College and Career Pathway: Secondary

Area of Study: Technology and Engineering Education

Pathway: Project Lead the Way (National Pre-Engineering Program)

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																											
7 th Grade	8 th Grade	Middle School	High School	9 th Grade Suggested	10 th Grade Suggested	11 th Grade Suggested	12 th Grade Suggested	Beyond High School																																												
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts	3.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	Language Arts 12 1.00	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <p>> Certificate > Associate degree > Bachelor degree > Professional degree > On-the-job training > Apprenticeship > Military training</p>																																											
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Get the Facts Project Lead the Way is offered in over 45 states and the District of Columbia.					CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL																																															
<p>In Utah, an engineer, professional or structural, must be licensed.</p>					<table><thead><tr><th>Course #</th><th>Foundation Courses: (required)</th><th>Credit</th></tr></thead><tbody><tr><td>21.0120</td><td>Engineering Design, Introduction</td><td>1.00</td></tr><tr><td>21.0122</td><td>Principles of Engineering</td><td>1.00</td></tr><tr><td>21.0121</td><td>Digital Electronics</td><td>1.00</td></tr><tr><td colspan="2">Choose one of the following courses:</td><td></td></tr><tr><td>21.0123</td><td>Computer Integrated Manufacturing</td><td>1.00</td></tr><tr><td>21.0125</td><td>Civil Engineering & Architecture</td><td>1.00</td></tr><tr><td>14.0201</td><td>Aerospace Engineering</td><td>1.00</td></tr><tr><td>21.0124</td><td>Engineering Design & Development</td><td>1.00</td></tr><tr><td colspan="2">Elective Courses:</td><td></td></tr><tr><td>48.0101</td><td>Drafting/CAD</td><td>1.00</td></tr><tr><td>47.0105</td><td>Electronics</td><td>1.00</td></tr><tr><td>48.0503</td><td>Machine Tool</td><td>1.00</td></tr><tr><td>32.0199</td><td>Student Internship (Critical Workplace Skills)</td><td>.50</td></tr></tbody></table>					Course #	Foundation Courses: (required)	Credit	21.0120	Engineering Design, Introduction	1.00	21.0122	Principles of Engineering	1.00	21.0121	Digital Electronics	1.00	Choose one of the following courses:			21.0123	Computer Integrated Manufacturing	1.00	21.0125	Civil Engineering & Architecture	1.00	14.0201	Aerospace Engineering	1.00	21.0124	Engineering Design & Development	1.00	Elective Courses:			48.0101	Drafting/CAD	1.00	47.0105	Electronics	1.00	48.0503	Machine Tool	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50	
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002101

High School to College & Career Pathways: post-secondary

Our Mission:

The post-secondary component of the High School to College and Career Pathways are designed to increase students' awareness of the opportunities to transition to education and training beyond high school, enabling them to complete more rapidly, and with more focus.

Overview:

The 62 Pathways reflect recommended programs of study for secondary students (grades 7-12). The post-secondary pathways build recommended programs of study for students within their regions on this foundation. The number of post-secondary pathways developed in a region depends partly on the institutions in the region. For example, there may be two different post-secondary pathways tied to the "Automotive Service Technician" Pathway within a region that has both a Utah College of Applied Technology (UCAT) campus, and a college or university that offers training in the Automotive Services. In contrast, there may be no post-secondary component for the "Commercial Aviation" Pathway in some regions, given the limited number of post-secondary schools that have related programs to offer.

High school programs are closely coordinated with higher education to facilitate student progress from high school to college, while minimizing – even eliminating – duplication of courses, and assuring students have the necessary skills to succeed.

Advantages of Pathways:

- Heighten awareness of **concurrent enrollment** options within specific pathways.
- Promote **articulation agreements** with colleges to define high school courses that will be accepted toward completion of certificates and two- or four-year degrees.
- Bring **added attention to post-secondary programs** that may not be well known to students, but offer attractive options for training and employment.
- Help students develop the detailed **education plans** that enable them to transition and succeed in post-secondary programs.

Notes on Concurrent Enrollment:

- Concurrent enrollment courses are typically **college courses** taught on high school campuses.
- Concurrent enrollment credit courses are **fully transferable** to public colleges and universities in Utah and are generally transferable to other colleges and universities throughout the United States.
- Students who participate in concurrent enrollment are **more likely to enter and persist** in post-secondary education programs.
- Concurrent enrollment **saves both time and money**, promoting efficiency of learning (reduced repetition in grades 11-14), enhancing admission to and retention in college, and increasing the likelihood of timely graduation from college.

Notes on Articulation Agreements:

- Articulation agreements promote the conversation between high schools and post-secondary schools in order to identify common **curricular objectives**.
- Articulation agreements allow **high school elective coursework** to be accepted for credit within a specific college major at a specific institution.
- Enrolling in high school courses that have been defined by articulation agreements, gives students a **head start** on completing a post-secondary program of study.

Notes on Lesser Known Post-secondary Programs:

- The Pathways initiative **broadens the types of programs** being marketed to Utah students to include certificate, apprenticeship, and other lesser-known post-secondary training options.
- Making the connections from the secondary pathways to the post-secondary pathways offered on campuses of the **Utah College of Applied Technology** will help students pursue training without interruption.
- Information on the occupations needed in a **regional labor market** – and the training/education it takes to qualify for those occupations – is better organized and accessible to students and adults.

SAMPLE *High School to College and Career Pathway: post-secondary*

Area of Study: Marketing

Pathway: Marketing Management

Region: Sample					
College / Institution: Sample post-secondary institution					
Articulation Agreement in place? Yes No					
Name of Degree or Certificate: Marketing Management, AAS Degree (67 hours required)					
High School Courses That Link to College Major					
H.S. CIP#	High School Suggested Courses	H.S. Credit	College Course #	College Courses in Major	College Credits
	ENGL1010	1.00	ENGL 1010	Intro to Writing	3.00
	FIN1380	.50	FIN1380	Financial Math	3.00
52.0511	Bus. Communications I	.50	BUS2200	Bus. Communications	3.00
08.0710	Customer Service	.50	CST1010	Customer Service Technology	2.00
08.0708	Marketing	.50	MKTG1030	Intro to Marketing	3.00
08.0211	Leadership Principals	.50	BUS1900	Leadership Management	3.00
08.9904	Promotion	.50	MKTG1070	Promotion	3.00
08.0705	Retail Management	.50	MKTG1090 or MKTG2360	Retail Management	3.00
Note: Choose from two areas below:		2.00	Note: Choose from two areas below:		6.00
	Biology/Science			Biology/Science	
	Fine Arts			Fine Arts	
	Humanities			Humanities	
	Physical Science			Physical Science	
	Social Science			Social Science	
	Total H.S. Credits	6.50		Total College Credits Saved	29.00
Total Credits Saved (Out of 67 required credits 38 are left = 29 credits saved)					
Approximately 40% saved					

NOTE: This is a regional agreement. Some classes and some concurrent enrollment agreements may not be available in your particular high school. See your individual school for specific program offerings.

General Information:

- The term “Career and Technical Student Organizations” (CTSOs) means an organization for individuals enrolled in a CTE program that engages in leadership activities as an integral part of the instructional program.

- CTSOs present organized activities for students to gain personal and leadership skills, making them more employable, preparing them to become productive citizens, and assisting them in assuming positive roles in the home and community. They are not after-school clubs where only a few CTE students belong, but a powerful instructional tool integrated into the CTE classroom.

Notes for Teachers and Counselors:

- **DECA** – An Association of Marketing Students. DECA is an organization that promotes leadership development, service to the community, and vocational understanding.
- **FLBA** – Future Business Leaders of America. FBLA provides students with opportunities for leadership, community involvement, business partnerships, and competition with other students in events ranging from Public Speaking to Job Interview to Parliamentary Procedures.
- **HOSA** – Health Occupations Students of America. HOSA provides students with opportunities to attain the knowledge, skills and leadership characteristics necessary to succeed in a health care profession, through leadership training, career training, and service projects.
- **SkillsUSA** – Skilled and Technical Sciences Student Organization. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship, and character development. The organization builds and reinforces self-confidence, work attitudes, and communication skills. It emphasizes total quality at work, high ethical standards, superior work skills, lifelong education and pride in the dignity of work.

- **TSA** – Technology Student Association.

TSA is the only student organization dedicated exclusively to students enrolled in technology education classes in grades K-12. Students participate in chapter fund-raising activities and community service projects. Leadership training is offered to student officers at the local, state, or national levels.

- **FCCLA** – Family, Career and Community Leaders of America. FCCLA provides students with opportunities to attain knowledge, skills, and leadership characteristics necessary to succeed in life, as well as promoting personal growth and leadership development.

- **FFA** – The Organization for Agricultural Education Students. FFA is dedicated to making a positive difference in the lives of young people by developing their potential for premier leadership, personal growth, and career success through Agricultural Education.

Pathways:

- In addition to offering a wide variety of specific career and technical training, CTE integrates student leadership elements, which complements student participation in the CTE courses, programs, and pathways.
- Participation in CTSOs as part of CTE Pathways will enhance student learning, awareness to education and career opportunities, and employability skills.

Transition to Post-Secondary and/or Career:

- Students who participate in CTSOs obtain important employability skills essential to a successful career in business and industry.
- Employers value the skills taught through CTSO activities, and student participation in these programs provides them with advantages for entry into the workforce.

Our Mission: Comprehensive Counseling and Guidance is designed to assist students through specific self-appraisal and self-improvement activities, to enable effective planning to meet their personal education and career goals.

General Notes and Tips:

- The Comprehensive Counseling & Guidance Program provides every student with decision-making and planning skills in order to prepare for his or her future.
- The Comprehensive Counseling & Guidance Program is a systematic, developmental program available throughout a student's secondary education.

Notes and Tips for Teachers and Counselors:

- Teachers and counselors are encouraged to continue to deliver guidance curriculum in classrooms and structured group activities.
- Individual Planning is a process that includes activities to assist students and their parents or guardians in planning, monitoring, and managing the student's learning as well as his or her personal, educational, and career goals.
- Counselors respond to the needs of the students in their school setting.

Goals:

- School guidance programs are unique to each individual school and community. Programs focus on goals that will:
 - **Impress** all students in a powerful and effective way with the importance of decision making and planning for life after high school.
 - **Encourage** and assist each student in developing a Student Education Plan (SEP) or a Student Education Occupation Plan (SEOP).
 - **Direct** the guidance program to provide for student growth in the areas of academic/learning development, life/career planning, multicultural/global citizen development/and personal/social development.

- **Involve** the school (students and staff), the home (entire family), and the community (neighborhood and workforce) in implementing a Comprehensive Counseling and Guidance Program.

Pathways:

- The Comprehensive Counseling and Guidance Program is crucial to the implementation of High School to College and Career Pathways.
- The Pathways provide templates for school counselors to utilize when working with students on developing individual Student Education Occupation Plans.
- Through the SEOP process, counselors identify appropriate pathways that meet each student's interests, abilities, and goals.

Transition to Post-Secondary and/or Career:

- The Guidance Program provides every student with decision-making and planning skills in order to prepare for his or her future.
 - Students who are enrolled in schools with highly implemented Comprehensive Counseling and Guidance Programs take more high-level math and science classes and perform better in every area of the ACT exam. (IBRIC)
 - CTE students who receive effective guidance and advisement services are much more likely to complete a rigorous curriculum of English, science, and math and have higher test scores than those students who have not received such guidance. (SREB)

Our vision is to provide every student with the assistance and guidance to effectively identify, select, plan, and prepare for a career of choice, while giving each student the encouragement and support to achieve the goals that will enable him or her to have increased success when embarking on a career through immediate job entry or additional training opportunities.

Verifying Technical Skill Attainment

SKILL CERTIFICATE PROGRAM

Our Mission: The Skill Certificate Program provides students with opportunities to receive instruction aligned with standards and objectives set by the state of Utah and by industry.

General Information:

- Skill Certificate assessments are available at the end of CTE courses.
- Students participate in the Skill Certificate assessments to verify competency and skill.
- A state CTE Skill Certificate is awarded to students who achieve skill attainment.
- The standards in the CTE courses that are assessed through this program are connected to post-secondary programs.
- CTE Skill Certificates obtained by students can be used as they apply for employment or as they transition into post-secondary programs as a verification of skill.
- What began as a small number of CTE Skill Certificate tests in 1995 now total 126. The testing program continues to grow from over 32,000 test takers in 1995-96 to over 182,000 test takers in 2005-06.
- In addition to assessments developed by the state, industry and licensure tests are available. Some examples are automotive, certified nursing assistant, computer programming, computer networking, cosmetology, culinary arts, emergency medical technician, fire science, and pharmacy technician.
- Teachers use the state CTE standards and Skill Certificate programs to align curricula.
- Teachers and counselors can encourage students to use the CTE Skill Certificates in their portfolios.

Pathways:

- CTE Skill Certificate assessments are available in each of the eight areas of study: Agriculture, Business, Family and Consumer Sciences, Health Science and Technology, Information Technology, Marketing, Technology and Engineering, and Trade and Technical.
- Skill Certificate assessments are available for CTE courses in each of the pathways.

Transition to Post-Secondary and/or Career:

- The CTE Skill Certificate program measures student skill attainment of the core standards and competencies needed to be successful in the workforce.
- While the assessment system is not a formal certification program, the certificates issued to students can be used when seeking a job or in applying for further education and training as evidence of the student's accomplishments.
- Because the core standards and competencies are aligned with business and industry and to post-secondary programs, the CTE Skill Certification program helps students transition to post-secondary programs and careers.

Our vision is to give every student the opportunity to perform to the best of his or her ability by encouraging him or her to participate in a variety of skill tests that will aid in jump-starting careers through development of academic knowledge and technical skill attainment.



Our Mission: Work-Based Learning gives students the opportunity to learn a variety of skills by expanding the walls of classroom learning to include the community. By narrowing the gap between theory and practice, work-based learning creates meaning for students.

General Information:

- Work-Based Learning provides opportunities for students to learn a variety of skills through rigorous academic preparation with hands-on career development experiences. Under the guidance of adult mentors, students learn to work in teams, solve problems, and meet employers' expectations.

Notes for Teachers and Counselors:

- Work-Based Learning is integrated and grade-appropriate at all levels of education. Career awareness, exploration, orientation, and preparation activities are coordinated with school-based learning activities.

- o **Awareness:** In grades K-6, students are introduced to a multitude of careers through career days (such as tool days and vehicle days), workplace visits, job shadowing, and guest speakers.

- o **Exploration:** In grades 7-8, students explore career options in a particular field of work through career fairs, field studies, job shadowing, and guest speakers.

- o **Orientation:** In grades 9-10, students become oriented to a specific career(s) through career fairs, job shadowing, and guest speakers.

- o **Preparation:** In grades 11-12, students prepare for a career of their choosing through internships, apprenticeships, clinical work experiences, and cooperative work experiences.

Goals:

- Connect the community and the classroom by using community resource persons to emphasize both work and occupations. Effective Work-Based Learning experiences will:
 - o Help students understand career application of subject matter.
 - o Teach and reinforce productive work habits.
 - o Emphasize career awareness and exploration.
 - o Reduce bias and stereotyping in career awareness and exploration.

Pathways:

- Work-Based Learning (WBL) experiences are available in each pathway. Through a variety of WBL experiences students see, firsthand, how classroom instruction connects to the world of work and future career opportunities. Experiences include, but are not limited to, apprenticeships, career fairs, cooperative work experiences, field studies, guest speakers, job shadows, and student internships.

Transition to Post-Secondary and/or Career:

- Work-Based Learning provides students with the opportunity to see how classroom instruction connects to the world of work and future career opportunities.
- Work-Based Learning improves post-secondary prospects for each student.
- Work-Based Learning helps students understand workplace expectations.

Our vision is to see that all students have the opportunity to learn skills and to be introduced to the working world outside of book learning, through a variety of Work-Based Learning activities that will enable them to be prepared to enter the workforce upon graduation from high school.

Career Pathway

Coherent groupings of courses within Career and Technical Education areas of study that offer students depth of knowledge and skill. Career Pathways are typically linked with specific post-secondary programs culminating with degrees or certificates.

- Organizes Career and Technical Education courses into coherent groupings.
- Enhances (doesn't supplement) a challenging academic core.
- Helps students focus on career pathways that are in demand and lead to economic self-sufficiency.
- Encourages linkages between high school and post-secondary institutions, offering non-duplicative technical courses leading to degree or certification.
- Is linked to the national Career Clusters.

Career Field

The career fields are aligned with the Holland Codes, which is a way of grouping occupations that helps students focus on their career interests. When the relationship between personal characteristics (interests and work values) and potential occupations is apparent, a student more readily engages in his or her career planning process. Making the relationship between a student's personal characteristics, interests and work values, and potential occupations helps students more readily engage in the career planning process. The Utah Career Fields are as follows:

- Technical (Realistic)
- Scientific (Investigative)
- Arts and Recreation (Artistic)
- Social Humanitarian (Social)
- Marketing and Administration (Enterprising)
- Business Operations (Conventional)

Areas of Study

In Utah, the "career-tech proper" curriculum is organized into eight areas of study:

- Agricultural Education
- Business Education
- Family and Consumer Sciences Education
- Health Science and Technology Education
- Information Technology Education
- Marketing Education
- Skilled and Technical Sciences Education
- Technology and Engineering Education

Supporting Programs

Supporting programs help to strengthen the ties between school and work by enhancing students' Career Field and Pathway exploration and training.

- Career and Technical Student Organizations (CTSOs)
- Comprehensive Counseling and Guidance
- Concurrent Enrollment
- Skill Certificate Program
- Work-Based Learning

National Career Cluster

Career Clusters, which were developed by the Office of Vocational and Adult Education at the U.S. Department of Education, group occupations into broad, industry-based categories. Crosswalks have been developed showing the relationship between Utah's Pathways and the National Career Clusters.

College

College means post-secondary training and education, including completion of industry certificates, certificates, associate of applied science degrees, associate's degrees, baccalaureate degrees, and graduate degrees. College training and education can be obtained in the following institutions:

- Public and private four-year colleges and universities
- Two-year community colleges or junior colleges
- The Utah College of Applied Technology
- Other programs

ACRONYMS

Utah's Pathway Initiative

ACA American Counseling Association
 ACSCI . . . Association for Computer-based
 Systems of Career Information
 ACTE Association for Career and Technical
 Education
 ADA Americans with Disabilities Act
 ASCA American School Counseling Association
 ASVAB . . . Armed Services Vocational Aptitude Battery
 ATC Applied Technology College
 BLS Bureau of Labor Statistics
 CBO Community-based Organization
 CCGP . . . Comprehensive Counseling and
 Guidance Program
 CIDS Career Information Delivery System
 (in Utah, this is Choices)
 CIP Classification of Instructional Programs
 CLEP College-Level Examination Program.
 CTE Career and Technical Education
 CTSO Career and Technical Student Organizations
 CWS Critical Workplace Skills
 DOE Department of Education
 DOL Department of Labor
 DOPL . . . Department of Occupational and
 Professional Licensing
 DWS Department of Workforce Services.
 EEO Equal Employment Opportunities
 ESEA Elementary Secondary Education Act
 FTE Full-time Equivalent
 FY Fiscal Year
 GED General Education Development.
 LMI Labor Market Information
 NAICS . . . North American Industry
 Classification System

NCDA . . . National Career Development Association
 NCDG . . . National Career Development Guidelines
 NCSC . . . National Crosswalk Service Center
 NEA National Education Association
 O*NET . . Occupational Information Network
 OJT On-the-Job Training
 OOH Occupational Outlook Handbook
 OOQ Occupational Outlook Quarterly
 OVAE . . . Office of Vocational and Adult Education
 PLUS . . . Parents Loans for Undergraduate Students
 RFP Request for Proposal
 SCANS . . Secretary's Commission on
 Achieving Necessary Skills
 SDA Service Delivery Area
 SEOG . . . Supplemental Educational Opportunity
 Grant Program
 SEOP . . . Student Education Occupation Plan
 SOC Standard Occupational Classification
 UACTE . . Utah Association for Career and
 Technical Education
 UCOPE . . Utah Centennial Opportunity Program
 for Education
 UEA Utah Education Association
 UECLP . . Utah Engineering and Computer Service
 Loan Forgiveness Program
 UEN Utah Education Network
 UESP . . . Utah Educational Saving Plan Trust
 UHEAA . . Utah Higher Education Assistance Authority
 USHE . . . Utah System of Higher Education
 USOE . . . Utah State Office of Education
 WBL Work-Based Learning
 WIA Workforce Investment Act
 WPU Weighted Pupil Unit



Areas of Study	<p>The Secondary School Taxonomy (maintained by the National Center of Educational Statistics) is organized into four distinct curricula – Academic, Vocational, Enrichment, and Special Education. The “vocational” – or CTE – curriculum is subdivided into three broad categories: Family and Consumer Sciences Education (FACSE [non-occupational]), General Labor Market Preparation (GLMP), and Special Labor Market Preparation (SLMP) – i.e., career-tech proper. In Utah, the “career-tech proper” curriculum is organized into eight areas of study:</p> <ul style="list-style-type: none"> • Agricultural Education • Business Education • Family and Consumer Sciences Education • Health Science and Technology Education • Information Technology Education • Marketing Education • Skilled and Technical Sciences Education • Technology and Engineering Education
Articulation Agreement	A strategy for facilitating the transfer of credits between a high school and a post-secondary institution, or between two post-secondary institutions to define the specific courses that may be taken at one institution and will be accepted for credit at the second.
Association for Computer-based Systems of Career Information (ACSCI)	Professional consortium dedicated to defining standards of quality for sources of career information and to providing training to advance career information delivery systems.
Career	The sequence of work or leisure activities in which one engages throughout a lifetime, unique to each individual.
Career and Technical Education (CTE)	A vast number of classes and programs that teach the high demand skills needed to get a job, to cross-train for different positions, or retrain for a new career. CTE is designed to prepare high school students to transition successfully to post-secondary education, and to help workers acquire job skills in new fields or refresh skills in an existing career path. Formerly called Vocational Education.
Career and Technical Education Programs of Study	State-recognized coherent groups of courses within Career and Technical Education (CTE) Areas of Study at the secondary or post-secondary level that provide individuals with rigorous content aligned with challenging academic standards, relevant technical knowledge, and skills needed to prepare for further education and careers in current or emerging professions. Secondary education CTE Programs of Study link to CTE Programs of study (majors) at the post-secondary level and culminate with a college certificate or degree.
Career Development	Aspects of an individual's experience over a lifetime that are relevant to personal choice, entry and progress in educational, and vocational pursuit.

Career Fields	<p>The career fields are aligned with the Holland Codes, which is a way of grouping occupations to help students focus on their career interests. When the relationship between personal characteristics (interests and work values) and potential occupations is apparent, a student more readily engages in his or her career planning process. Making the relationship between a student's personal characteristics (interests and work values) and potential occupations helps students more readily engage in the career planning process. The Utah Career Fields are as follows:</p> <ul style="list-style-type: none"> • Technical (Realistic) • Scientific (Investigative) • Arts and Recreation (Artistic) • Social Humanitarian (Social) • Marketing and Administration (Enterprising) • Business Operations (Conventional)
Career Information Delivery System (CIDS)	Provides integrated career development processes linked to work-related and educational information for multiple audiences. The “state-sponsored” CIDS in Utah (includes information customized specifically for Utah users of the system) is the <i>Choices</i> program.
Career Pathway	Coherent groupings of courses within Career and Technical Education areas of study that offer students depth of knowledge and skill. Career Pathways are typically linked with specific post-secondary programs culminating with degrees or certificates.
Carl D. Perkins Vocational and Technical Education Act (Perkins)	Originally authorized in 1984, and most recently reauthorized in July of 2006, Perkins provides federal funding to help ensure that individuals are equipped with the academic and technical skills needed to succeed in a knowledge- and skills-based economy. Perkins supports Career and Technical Education that prepares students for both post-secondary education and the careers of their choice.
Choices Explorer	Comprehensive online education and career exploration system that provides extensive libraries of education, career and recreation articles in an interactive magazine-style format. This web-based program is most often used in Utah's middle/junior high schools and is an integrated component of the Career and Technology Education Core Curriculum for seventh graders.
Choices Planner	Comprehensive online career information delivery system to help students and others in career transition build powerful plans as they compare, connect and choose from a vast network of work and education options.
College	<p>College means post-secondary training and education, including completion of industry certificates, certificates, associate of applied science degrees, associate's degrees, baccalaureate degrees, and graduate degrees. The college training and education can be obtained in the following institutions:</p> <ul style="list-style-type: none"> • Public and private four-year colleges and universities • Two-year community colleges or junior colleges • The Utah College of Applied Technology • Other programs

College General Education Requirements	Considered the foundation of a college education, these require all students, regardless of their chosen major, to take some courses to help them master basic concepts of a broad array of the intellectual disciplines, especially communication, math, science, technology, humanities and social sciences.
College Level Examination Program (CLEP)	Program of exams in undergraduate college courses that provides students of any age with the opportunity to demonstrate college-level achievement.
College Major Course Requirements	Defined by a college or department, these courses are highly related to the major being pursued and allow the student to specialize in a particular area of study.
Community-based Organization (CBO)	A type of non-governmental organization that serves a specific population in a narrow geographic area.
Completer	A student is defined as a “completer” when he or she completes all the courses and credits indicated for a CTE Pathway. The percentage of students identified as completers reflects the completion rate .
Comprehensive Counseling and Guidance Program (CCGP)	Designed to assist K-12 students through specific self-appraisal and self-improvement activities, Utah's CCGP promotes effective planning to meet each student's personal education and career goals. The CCGP Student Outcomes drive the delivery of direct services to 100% of Utah students through the Guidance Curriculum, Individual Planning and Responsive Services activities.
Concurrent Enrollment Course	A college class usually taught at the high school by an approved high school teacher. Students earn both high school graduation and college credit – concurrent credit – upon successful completion.
Core Curriculum	A predetermined body of skills, knowledge, and abilities taught to all students under the assumption that there is a uniform body of knowledge that will produce educated and responsible graduates.
Critical Workplace Skills (CWS)	First described in the <i>Secretary's Commission on Achieving Necessary Skills (SCANS) Report</i> , these skills prepare students for success in the work environment. Critical Workplace Skills is the classroom instructional component of an internship.
Department of Workforce Services (DWS)	State government agency that connects job seekers to employers and compiles all economic data for the state of Utah.
Education Plan	An individualized plan developed by a student and his or her parents in consultation with a school counselor that defines the courses and other activities that will help the student meet educational goals and objectives.
Elective Courses	Courses that students can choose to take; i.e., individual courses not specifically required for graduation.
Employment Projections	Information resulting from the Occupational Employment Statistics/Matrix program that allows the Utah Department of Workforce Services to estimate the number of future job openings likely to be created in each occupation, and to show which occupations are expected to grow most rapidly and which are declining in the state and in various sub-state areas. In evaluating employment prospects, it is important to consider <i>job openings</i> , as well as the growth rate, as only a small number of workers may be employed in some fast-growing occupations.

Foundation Courses	CTE courses lay the groundwork for the CTE Pathways. Specific CTE courses are defined for each Pathway and are required for completion of the Pathway.
Full-time Equivalent (FTE)	A figure calculated from the number of full-time and part-time employees in an organization that represents these workers as a comparable number of full-time employees.
General Education Core Credits	Correlated to the Utah State Core Standards and objectives, these credits are awarded for completion of the curriculum defined for grades 9-12 for graduation.
General Education Development (GED)	A certificate that an adult can receive through testing in lieu of a high school diploma. The GED tests consist of following five subtests: Social Studies, Language Arts/Writing (2 parts), Language Arts/Reading, Science, and Mathematics (2 parts).
Industry	A collection of employers grouped according to product, service, or process.
Introductory Courses	CTE introductory courses suggested for the CTE Pathways typically provide broad definitions of the related area of study and promote students' understanding of related basic concepts.
Job	A position with specific duties and responsibilities in a particular workplace.
Labor Force	The total number of people employed or seeking employment in a country or region.
Labor Market Information (LMI)	Data about workers, jobs, industries and employers, including employment, demographic and economic data. The federal government is responsible for developing, maintaining and reporting career and labor market information. States collect the raw data and complete extensive analysis on the data to make reports to various federal agencies. The Workforce Information Division of the Utah Department of Workforce Services conducts additional surveys to develop additional information for consumers of LMI.
Labor Markets	Through the operation of a labor market, employers obtain the labor needed to transform raw materials into goods and services, and workers earn an income to support themselves and others.
National Career Cluster	Career Clusters, developed by the Office of Vocational and Adult Education at the U.S. Department of Education, group occupations into broad, industry-based categories. Crosswalks have been developed showing the relationship between Utah's Pathways and the National Career Clusters.
National Career Development Guidelines (NCDG)	Provides the framework for building and evaluating comprehensive career development programs for youth and adults in a variety of settings.
Non-Governmental Organization (NGO)	A private organization that pursues activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development.
Nontraditional Occupation	Occupations for which individuals from one gender comprise less than 25 percent of those employed in such an occupation or field of work.

Occupation	A group of jobs with common characteristics that require similar skills but are found in a variety of industries and organizations.
Occupation Employment Statistics (OES)	The national OES survey is conducted semi-annually as part of a joint federal-state effort to gather occupational and wage data from employers. Establishments of all sizes, across all industries, and across all sectors of the economy are included. The purpose of the survey is to develop estimates of total wage and salary employment by occupation, wage range, and type of industry.
Occupational Information Network (O*NET)	This U.S. Department of Labor occupational database provides detailed job descriptions and sorts occupations by titles and industries.
Parents Loans for Undergraduate Students (PLUS)	Loan program under which parents may borrow costs of attendance on behalf of students.
Pathway Courses	CTE courses suggested to augment the regular high school program of study for students interested in a specific career major or occupational area.
Program of Study	Sequence of courses that provide individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions.
School Counselor	A licensed educator who provides career and educational counseling for students, offering information on career choices, colleges, financial aid, entrance requirements and trade schools and apprenticeship programs. A key effort of Utah's counselors is to work with students and their parents in the development of a Student Education Occupation Plan.
Skill	An attribute required of a worker in order to complete a specific work task.
Skill Certificate	Utah's Skill Certificate program provides students with an opportunity to receive instruction aligned with standards and objectives set by the state of Utah and industry. Students receive a skill certificate verifying achievement.
State Requirements	Refers to the minimum credits that students must complete in order to graduate from a Utah high school.
Student Education Occupation Plan (SEOP)	A Utah-specific format for individualized student planning that focuses on recognizing student accomplishments and strengths and student and parent/guardian planning, monitoring, and managing education and career development in grades 7-12.
Supplemental Educational Opportunity Grant (SEOG)	Grant program for students with exceptional need – up to \$4,000 per year available, depending upon need.

Supply and Demand	Demand for labor varies as new jobs and occupations are created by social, economic and technological changes in society. The supply of labor refers to the number of persons working and those seeking work.
Supporting Programs	<p>Programs to help strengthen the ties between school and work by enhancing students' Career Field and Pathway exploration and training. These include the following:</p> <ul style="list-style-type: none"> • Career and Technical Student Organizations (CTSOs) • Comprehensive Counseling and Guidance • Concurrent Enrollment • Skill Certificate Programs • Work-Based Learning
Unemployed	A term defined by the Bureau of Labor Statistics to refer to persons who are not currently performing work for pay or profit, but are looking for a job and are available to work.
Utah Centennial Opportunity Program for Education (UCOPE)	State need-based grant and work-study program administered by Utah Higher Education Assistance Authority.
Utah Education Network (UEN)	The umbrella organization, operating under the direction of the State Board of Regents, for delivery of instruction via technology.
Utah Engineering and Computer Service Loan Forgiveness Program (UECLP)	New loan forgiveness program "to recruit and train engineering, computer science, and related technology students to assist in providing for and advancing the intellectual and economic welfare of the state."
Utah Higher Education Assistance Authority (UHEAA)	Administers Utah's student financial aid programs, including comprehensive outreach and information to assist Utah residents, and students attending Utah post-secondary institutions, in obtaining financial access to higher education.
Wage Information	Based on information gathered under the Occupational Employment Statistics program, the Workforce Information Division of the Utah Department of Workforce Services offers a look at the wages currently being paid to workers in Utah. When analyzing wage information for an occupation, the most accurate picture is likely to be reflected by the middle range of wages for that occupation as the range will account for inexperience or greater experience, education, skills and high productivity.
Weighted Pupil Unit (WPU)	The unit of measure of factors that is computed in accordance with the Minimum School Program Act for the purpose of determining the costs of a program on a uniform basis for each district.
Work	Purposeful activity; produces something of value for the worker and/or other people. Workers may or may not be compensated for their work.

Work-Based Learning (WBL) Work-Based Learning refers to educational experiences that occur in cooperation with business/industry and other community partners. Work-Based Learning experiences occur as a coherent sequence of career awareness exploration, job training and experience activities that are coordinated with school-based learning activities. There are Work-Based Learning activities appropriate for every grade level. Work-Based Learning experiences include:

- Apprenticeships – Formal systems of supervised training approved by the Bureau of Apprenticeship and Training.
- Career fairs – Events with business participants to promote career awareness and exploration.
- Clinical work experiences – These work experiences usually take place in medical settings where students practice skills learned in the classroom.
- Cooperative work experience (Co-Op) – Cooperative work experiences are paid experiences.
- Field studies – Planned group activities that provide students opportunities to observe skills and jobs in a variety of settings at a workplace.
- Guest speakers – Provide opportunities for students to hear firsthand from a person in a particular industry within a classroom setting.
- Job shadows – Career activity lasting three to six hours in which students play an active role in learning.
- School-based enterprises – Allow students to run an actual small business.
- Student internships – Experiences where students work for an employer for a specified period of time to learn about a particular industry or occupation.

Workforce Trends

Term that refers to both demographic and employment trends that have an impact on employment outlook and are reflected in underlying variations in supply and/or demand.

Your Career is the Trip of a Lifetime: **GET DIRECTIONS!**

Kristine Dobson
Utah Career Resource Network

When was the last time you took a vacation? Did you head out of town? Did you have a destination in mind? Did you make some preparations, like gassing up the car or making flight reservations? Did you even go so far as to plan where you would be staying each night along the way?

This kind of planning is fairly typical of people hoping to make the most of their time away from work. Going on-line to check out all the travel options, discussing potential destinations with friends and co-workers, consulting a travel agent; it's all part of the fun! This kind of research and planning allows us to spend some time enjoying the trip before we ever leave home.

We're more likely to have a journey that isn't interrupted by such events as road closures, weather delays, or cancelled flights if we simply take some time to get directions from informed sources. This isn't to say that we can't alter our plan along the way. Maybe avoiding that road closure takes us somewhere that we decide we'd like to stop and explore, or perhaps the travel agent suggests a destination that we might never have considered on our own.

What does any of this have to do with career planning? Consider this: people spend way more time at work than they do on vacation, but questions like, "Did you have a destination in mind? Or "Did you make some preparations?" when applied to careers are often met with a blank stare. The sad fact is that many people put more thought into choosing a vacation destination than they do their vacation destination!

School counselors and others are working to remedy this situation by helping today's students get directions for the trip of a lifetime – their careers. One important strategy in this effort is the implementation of Utah's CTE Career Pathways.

The goal of Career Pathways is to establish a seamless education system that provides a one-system approach for student success, whether they're heading to formal education programs beyond high school, going directly to work, or – as is common – doing both.

The Utah CTE Career Pathways are the maps that can help guide students to the high school courses and post-secondary options most relevant to their chosen career destinations. Career Pathways facilitate the same kind of planning for careers that is applied to vacations. The strategy helps provide a one-system approach for student success, no matter where they're heading. Students know just where to go on-line to check out all the career options, have opportunities to discuss potential career destinations with friends, and regularly consult counselors, teachers and their parents as they plan their career journey. This kind of research and planning in school allows students to spend some time enjoying the trip before they ever leave home. It should also result in a more pleasant journey, unencumbered by unnecessary delays, while allowing for periodic evaluation of both the course and destination. And, who knows? Getting directions from informed sources along the way may lead students to a destination that they might never have considered on their own.

For additional detail regarding Utah's CTE Career Pathways, visit www.utahcte.org.

To GET DIRECTIONS for your career, visit www.careers.utah.gov.

*For more information on the critical role that teachers, counselors and families play in assisting young people to make informed career and academic choices, visit America's Career Resource Network Association: www.acrna.net/publications.htm

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High School to College and Career Pathways

COOL DESTINATIONS

Welcome to Career Pathways! A pathway is a method of searching for a career that fits your interests and lifestyle and then allows you to build academic courses around it. The pathway recommends individual high school courses – both academic and career-related – to concentrate on, which are specifically geared toward your chosen career. All of this planning starts as early as middle/junior high school and continues as you advance through high school.

The Map

What direction should you take?

Your school counselor will help you plan your high school coursework map as part of your Student

Education Occupation Plan (SEOP). The courses of study will give you options for entering the world of work while continuing your education. So, are you prepared with your own map?

Ask Yourself

What –

Do I want to be doing in 10 years?

Should I take to get ready for college?

Are the new graduation requirements?

Why –

Should I take this class?

Should I plan?

Should I study?

How –

Do I take advantage of the few electives that I have?

Do I make a lot of money?

Do I get labor market information?

The Road

Gaining independence, moving on and finding a career – that is what you can expect once you leave high school. The trick is to jump-start your future and plan for life after high school before graduation. But how can you do that?

*Career and Technical Education
Giving Students the Edge*

The Journey

On your mark, get set...

You will find that Pathways will increase your interest and achievement by helping to make connections between what you are learning in school and your future opportunities. More resources to help you pave your path can be found at www.careers.utah.gov and www.utahcte.org.



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